

MANAGER or Senior in good house; qualified; Extractor; married; 15 years' experience, London and Continental. 198 Castlenau, Barnes.

MANAGER, Senior, or Front Counter; tall; qualified; 25; best West-end Dispensing experience. "Pumilio," 117 The Chase, Olapham.

QUALIFIED; 27; tall; West-end, City experience; excellent references; outdoors; London or suburbs. "Ortol" (178/25), Office of this Paper.

EXPERIENCED Dispenser and Bookkeeper; well recommended by late employer, Dr. McElligott, Wigan. "Medicus," 17 King Street, Rock Ferry.

IN West of England (Devon preferred), Locum or other employment required by qualified; aged 30. Apply, "Dispatch" (168/40), Office of this Paper.

UNQUALIFIED; 25; disengaged; Photography; 9 years' good experience and references; City or suburbs. "G," 71 Gassiot Road, Tooting.

ASSISTANT (27) seeks situation; knowledge of Surgical Instruments, &c. "Radix," Mona Stores, Brynteg Post Office, Menai Bridge, Anglesea.

LADY Dispenser (Apothecaries' Hall certificate) desires engagement; experience; excellent testimonials. A. Pearson, Station Road, Drayton, Norwich.

JUNIOR (20), 5 ft. 11 in., good Dispensing experience, desires situation with high-class Chemist; exceptional references. Williams, 68 New Street, Portmadoc.

UNQUALIFIED; 33; tall; smart Counterman, competent Dispenser; 6½ years last situation; disengaged. Hudson, 3 Station Road, Weston, Bath.

QUALIFIED, with excellent references and experience, including West-end, seeks engagement as Senior; City preferred. 180/13, Office of this Paper.

MAJOR; married; 24; Manager or otherwise; energetic; Photography; excellent references; abstainer; April 3. Jones, c/o Peck, Chemists, Cambridge.

HOWELL MORGAN, M.P.S.; Pharmacie Liotard, Nice, France; aged 31; West-end experience; disengaged end of April; a good permanency preferred.

MANAGER or Assistant; qualified; 34; London and provincial experience; disengaged. Evans, Tanydderwen, Gylfachryda, Llanarth, Cardiganshire.

QUALIFIED Woman Dispenser seeks post; experienced; good testimonials; London Matriculation. Dawson, c/o Russell, Surgery, 218 Kilburn Lane, N.W.

MANAGER or Senior; disengaged; qualified; married; 33; 5 ft. 9 in.; good in all departments; Photography. "J. B.," 21 Umfreville Road, Harringay.

MANAGEMENT of genuine business; 2 to 3 months; nominal salary; view to purchase; every satisfactory reference; qualified; experienced. 181/37, Office of this Paper.

MANAGER or Locum; major qualification; fluent French; pushing salesman and good prescriber; age 36; married; disengaged. "Alpha," c/o Crew, 77 Gresham Street, E.C.

UNQUALIFIED Assistant; 31; capable of Managing; Window-dressing, Photographic and General Store experience; good references; City and Suburbs. 145/31, Office of this Paper.

PERMANENCY; unqualified Manager or Assistant; 40; 23 years' varied experience; disengaged April; married; good Prescriber; excellent references. "Aspeni" (181/18), Office of this Paper.

EVENINGS, as Assistant or Locum; thoroughly experienced; high-class Dispensing, with modern Store training; up-to-date business methods; smart and energetic; 28. 181/35, Office of this Paper.

CHEMIST, having disposed of his business, seeks appointment as Manager, either with or without view to purchase; good experience Stores, General, Retail, and Photographic. 185/1, Office of this Paper.

MANAGER, work up Branch; energetic; Prescriber, Extractor, Proprietary Salesman; tall; good address: 31. 90a Ormiston Road, Shepherd's Bush, W.

SENIOR or Manager desires permanency; qualified; West-end and provincial experience; good references. "Alpha," 25 Roubhury Terrace, Newcastle-on-Tyne.

MEDICAL Student (Minor man) seeks Locum during vacation in North of England: at liberty March 23 for 6 weeks. H. G. Davison, Y.M.C.A., Newcastle-on-Tyne.

ENERGETIC Pharmacist desires permanency as qualified assistant; high-class Store business preferred; 25; 5 ft. 10 in. "Mac," 38 Etheldreda Road, Shepherd's Bush.

UNQUALIFIED outdoors Assistant (39) disengaged; brisk Counterman, good Prescriber; well recommended; abstainer. "Chemicus," 1 Bethel Place, Uxbridge.

ABSTAINER; qualified; aged 25; good-class Dispensing, General trade and Photographic experience; indoors preferred; Assistant or Manager. Leeson, Coleshill, Birmingham.

THOROUGHLY competent Manager; qualified; 25; married; Dispenser, Extractor, Prescriber, Photographer; country, town, and Store experience. Cottrell, Pleasley, Mansfield.

OUTDOORS; 23; good Dispensing, Photographic, and Prescribing experience; unqualified; disengaged; permanency; North preferred. Lee, Montalbo Terrace, Barnard Castle.

COMMERCIAL Chemist, having high-class London Store experience as Manager, seeks similar appointment; West district preferred. "Energetic," 42 Alymer Road, Shepherd's Bush.

LADY Dispenser, Hall, experienced in every branch and highly recommended by firm of doctors, wants post, temporary or permanent, with doctor or institution. B. Evans, c/o Dr. Fox, Matlock Bath.

JUNIOR or Improver; 20; outdoors; height 5 ft. 8 in.; reliable and neat Dispenser, smart Salesman; capable of being left in charge; excellent references; disengaged. "Celer" (178/18), Office of this Paper.

ASSISTANT is open to engagement; good experience in provincial town; good knowledge of Oatle Medicines, Photography, &c.; first-class references. Apply, "T. McL," c/o Cork Chemical and Drug Company, Cork.

JUNIOR or Improver; 20; outdoors; abstainer; used to quick Cash trade; good Dispenser and Stockkeeper, also excellent Counterman; height 5 ft. 8 in.; excellent references; Leicester or near preferred. "Mistura" (178/19), Office of this Paper.

SURGEON'S ex-unqualified Assistant requires situation as Dispenser and Bookkeeper; aged 45; 6 years in present situation (indoors); highest references from present principal and others. Apply, stating terms, "Alpha" (179/11), Office of this Paper.

WANTED, by elderly gentleman (qualified), position as Branch Manager, Locum, or Dispenser; Manchester or Liverpool preferred; active, reliable; good references. Address, "T. E. R.," c/o Mr. Blore, Chemist, 281 Broad Street, Pendleton, Manchester.

WHOLESALE.

ADVERTISER requires situation in Wholesale; 8 years' experience. Palmer, 62 Fernhead Road, Maida Hill, W.

ADVERTISER (25), 8 years' experience Wholesale Patents, seeks improvement; office or warehouse. 184/6, Office of this Paper.

ADVERTISER (29), smart, energetic, good experience, seeks berth, Traveller or Assistant. "L.," 31 Howden Place, Leeds.

WANTED, situation as Junior Sundriesman or Clerk; aged 21; disengaged; good reference. "C.," 108 Boleyn Road, Forest Gate.

CHEMIST; 31; 14 years' Manufacturing experience; 10 years in charge of Laboratories. "Chemist," 18 Smithfield Street, Birmingham.

SITUATIONS WANTED—cont.

WHOLESALE—continued.

FOREMAN; Packed Goods and Store lines department; good general experience; excellent references. "Specialities" (180/8), Office of this Paper.

YOUNG man (25) desires change; 11 years' experience in Pill and Drug Room; excellent references, &c. "Delta" (182/1), Office of this Paper.

ENERGETIC Traveller (Chemists, Grocers, Stores) is open to handle one or two additional side-lines on commission only. 182/7, Office of this Paper.

ADVERTISER (19) desires situation with Druggists' Sundriesman; 4 years' Retail experience; good clerical abilities. Fogden, West Street, Havant.

GENTLEMAN calling upon Wholesale Chemists in London and Provinces is open to take up representation of additional house. 177/32, Office of this Paper.

REPRESENTATIVE, South and West England, South Wales: good connection; Drugs, Instruments, Sundries; disengaged. "Ergot" (180/7), Office of this Paper.

ASSISTANT seeks situation in Wholesale, any department; first-class experience in best houses; good references. "G." c/o Mr. Idenden, 75 High Street, Barnstaple.

POSITION of trust, likely to lead to representation; sound knowledge Retail and Road (practical); married; energetic; 30. "Representative" (182/2), Office of this Paper.

REPRESENTATIVE (London): good appearance and address; able, diligent, trustworthy; good references: Drugs, Sundries, or Specialities. "Exalgin," 2 The Parade, Norbury, S.W.

PHARMACEUTICAL Chemist, experienced all departments of the trade, long accustomed to control staff, seeks engagement; exceptional references. "Alpha" (180/18), Office of this Paper.

TRAVELLER, calling on over 500 Chemists in London, and well liked, can take another good commission on moderate terms. 185/5, Office of this Paper.

TRAVELLER.—Qualified Chemist (34), excellent record and experience of road, good connection chemists, &c., Yorks, wishes represent good house, that or other district. "Oitrene" (183/26), Office of this Paper.

CHEMIST (25), now managing small Proprietary, desires similar position, or as Assistant in Advertising Department; good original ideas; smart ad.-writer; capable; energetic. "E. C. B.," 189 Wardour Street, W.

MISCELLANEOUS.

Special charges are made for Advertisements under this heading, which can be obtained on application.

Replies to Advertisements may be addressed to this Office and forwarded to the Advertiser for an additional charge of 6d. Trade circulars and samples can in no case be forwarded.

IMPORTANT NOTICE TO CHEMISTS about opening new Premises.—We have positively the largest and finest Stock of Second-hand Fittings for sale at Unheard-of Prices; drawings and full particulars on application; inspection invited; shops fitted completely. Rudduck & Co., Shop-fitters, 262 Old Street, London.

TO Chemists Fitting or Contemplating Alterations.—Previous to Stock-taking we are offering the very large and well-assorted stock of modern fittings, dispensing screens, counters, &c., at reduced prices; job lines in recess labelled bottles, ungt. jars, and syrups; call and view.

PHILIP JOSEPHS & SON, 93 Old Street, London, E.C.

The COMPLETE FITTINGS of a HIGH-CLASS PHARMACY will be EXHIBITED at Stands Nos. 17, 18, and 19a at the CHEMISTS' EXHIBITION, and will be FOR DISPOSAL.

SEEDS! SEEDS!! SEEDS!!! Important to all Wholesale Buyers of New and Reliable Seeds. Brown's Wholesale List of Vegetable, Flower, and Farm Seeds for 1905 is now ready, post free. Penny Pictorial Packets, our Speciality, 3s. 6d. per 100; 31s. per 1,000. Send for List at once, gratis, and order your seeds fresh from the actual growers. E. P. Brown & Sons, Seed Growers, Coggeshall, Essex.

OPPORTUNITIES desired of investing sums from £25 to £50 in Businesses (London district) where same can be advantageously employed; cases of Beginners entertained. "Finance" (178/30), Office of this Paper.

A.B.C. SYSTEM OF ACCOUNTS for Retail Business: requires no knowledge of bookkeeping. Spontaneous testimonial: "Chemists, as a rule, are wretched bookkeepers (myself included), but if they only can be brought to use your A.B.C. system, as I am doing, that reproach will certainly be removed." Write for particulars: it will cost a postcard, but may save you pounds. McQueen & Sons, Devana Road, Leicester.

UNUSUAL OPPORTUNITY FOR A PROGRESSIVE FIRM.—Wanted, for the United Kingdom, a firm to introduce a splendid Preparation of approved repute, which is unequalled as a Blood Restorative and Tonic. This is an unusual opportunity to secure the sole selling rights in an article which shows a liberal profit, and for which there is a good market, that can be much increased by judicious advertising. Address, in confidence, 157/26, Office of this Paper.

MCADAM & TUCKNISS, Sharedealers, 30 Tranquil Vale, Blackheath, London, S.E. Telephones 81 and 81a Lee Green.

SHARES FOR SALE (free of commission, subject).—120 Idris "A" ordinary, 28/-; 79 "A" preference, 22/3; 100 G. B. Kent preference, 20/-; 240 Barclay & Sons fully paid preference, 12/6; 200 A. J. White ordinary, 3/4; 150 preference, 10/6; 100 Day & Martin ordinary, 18/3; 150 Lewis & Burrows ordinary, 5/9; 50 Vinolia preference, £4 8/9 c.d.; 150 Mazawattee Tea ordinary, 13/3; 100 Southall Bros. & Barclay preference, 22/4; 100 Peek Frean preference, 21/3; 100 International Sponge preference, 17/6.

WANTED (subject).—100 Camwal ordinary, 7/3 (small lots 6/3); 100 preference, 13/- (small lots, 11/-); 4 debentures, £41 10/- each; 50 J. Meggeson ordinary, 25/6; 20 preference, £4 17/6; 100 Lewis & Burrows ordinary; 100 preference, 12/-.

List of shares for sale and wanted sent free on application; highest references to bankers and many chemists with whom we do business; all kinds of Stock Exchange business transacted on best possible terms.

American Notes.

(From our Correspondent.)

NOT A WALK-OVER.—The work of organisation in New York City carried on by the N.A.R.D. is meeting with some difficulty. Many druggists prefer to tread the path of the sinful cutter, and they have threatened resignation from the local Associations if the Associations ally themselves with the movement. Hence it follows that two of the five or six Associations have refused to join the N.A.R.D., but have compromised by recommending that their members do so individually. Some objection, too, has been made to the declared intention of the N.A.R.D. organisers to exact a \$2.50 "organisation-fee" in addition to the customary annual dues of \$4. Despite these obstacles, the regular work of block-to-block organisation continues, and is said to be progressing favourably.

ALCOHOL FOR INDUSTRIAL PURPOSES.—At the present time there are three Bills before Congress on the alcohol-tax question. They are the Lovering Bill, providing for a refund of the taxes paid on domestic alcohol used in the manufacture of articles for export; the Boutell Bill (H.R. 9,302) providing for tax-free denatured alcohol; and the Boutell Bill (H.R. 9,303) providing for a reduction of the internal-revenue tax from the present rate of \$1.10 to 70c. per proof gal. As matters now stand, a rebate of the tax on imported alcohol used in the manufacture of articles for export is granted, but no such rebate is granted on domestic alcohol. The result is that imported alcohol replaces the domestic in all articles manufactured in bond for export. It is the object of the Lovering Bill to rectify this. The first Boutell Bill provides for something equivalent to English methylated spirit; but the other Boutell Bill providing for a reduction in the tax on pure grain alcohol is the measure most closely affecting pharmacists, as it would bring that material down to a point at which it would be used in larger quantities in the manufacture of tinctures, flavourings, extracts, and so on.



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THE CHEMIST AND DRUGGIST is supplied by subscription to the whole of the members of EIGHTEEN CHEMISTS' SOCIETIES in the British Empire, including Ireland, Australia, New Zealand, South Africa, and the West Indies. Besides, its paid subscription circulation at home and to all parts of the civilised world is intrinsically and numerically unique.

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Business with the Colonies.

THE series of interviews which are summarised in this issue suffice to show that business in the chemical and drug trades and their allied branches between the United Kingdom and the British Colonies is receiving the close attention of enterprising houses, and the Board of Trade returns month by month demonstrate that this trade is increasing. THE CHEMIST AND DRUGGIST has for more than a generation been fostering Imperial trade relations by all means that are possible for a trade journal, and it is again proposed to publish a

Colonial Issue of the "C. & D."

which will be circulated to all buyers (i.e., retailers and wholesalers) engaged in the business in the British Colonies and India. The circulation will include Australasia, South Africa, and other British possessions in Africa, Ceylon, the Straits Settlements, China, Japan, New Zealand, etc. This Colonial Issue gives advertisers an opportunity of bringing their goods directly under the notice of an important class of buyers at an extremely moderate cost. The issue falls in the week ending April 22, and we strongly advise early application to the Publisher, 42 Cannon Street, London, E.C., for space.

Summary.

The subjoined paragraphs give the gist of the more important matters in this issue, with the object of showing at a glance what has happened during the week. See also "Contents" in the first column.

ICELAND is now manufacturing cod-liver oil (p. 374).

INTERESTING facts about the B.P. will be found on p. 387.

QUITE a number of contracts settled are reported on p. 372.

FRENCH speciality manufacturers are working a scheme of price-protection (p. 374).

THE net personality of the estate of the late Mr. Charles Maw is over 300,000*l.* (p. 381).

THE HOME OFFICE has issued precautions regarding the storage and use of celluloid (p. 370).

AN assistant in the East sends a warning note for those who think of going out there (p. 408).

THE BROMIDES SITUATION in the United States is commented on by our New York correspondent (p. 403).

THE qualifying pharmaceutical examination in the Transvaal is likely to be of about Minor standard (p. 412).

AN UNEXPECTED DECLINE in bismuth and salts has taken place, the cause of which is outlined in a leading article on p. 385.

A PORTRAIT and some biographical notes of Dr. Francis Watts, C.M.G., erstwhile chemist's assistant, will be found on p. 410.

"XRAYSER," referring to the last official poisons record, shows that the scheduling of carbolic acid has decreased accidents (p. 383).

A DARWEN HERBALIST has been fined under the Medicine-stamp Acts for selling an ointment unstamped and without a licence (p. 378).

WE print a complete list of the awards by the Cape Town Industrial Exhibition to exhibitors connected with the chemical and drug-trades (p. 411).

OUR correspondents in Johannesburg and Durban send particulars of what the local authorities there are doing to receive the British Association next summer (p. 412).

MR. CAMPKIN, the Mayor of Cambridge, has had a good deal of publicity during the week, owing to four black students posing to him as members of the Sultan of Zanzibar's suite (p. 371).

THE Board of Trade returns for February show continued prosperity in import and export business. As far as the chemical and drug trades are concerned the position is stated in an article on p. 384.

THE ASH YIELD of compound liquorice-powder is an unreliable datum to go upon in estimating its value. So Mr. John Evans concludes in a paper read at Sheffield this week, which is printed on p. 396.

DR. F. B. POWER and Mr. Tutin have investigated glycerophosphoric acid in the Wellcome Chemical Research Laboratories, and have obtained some interesting results, which have been communicated to the Chemical Society (p. 395).

"LEAD IN PHARMACOPŒIA CHEMICALS" is the title of a paper contributed by Mr. C. A. Hill, B.Sc., who deals very fully with its occurrence and estimation, showing the conditions which vitiate analyses, the extent to which the impurity exists, and the limitations which may be put upon it (p. 388).

IN regard to the present condition and prospects of British export trade, we have made a number of inquiries of leading business men, and the results of the interviews are embodied in an article commencing on p. 375. "Our Town Traveller" also reports interviews he has had on the matter (p. 377).

MR. J. STUART HILLS, in association with Professor Wynne, has been engaged in the Pharmaceutical Research Laboratories on a chemical study of linseed. It has been found that linin is not the purgative principle of the plant, but a crystalline hydrolytic product of the amorphous purgative principle (p. 395).

THE Council of the Pharmaceutical Society of Ireland has resolved to raise the status of its preliminary examination. It was also decided to communicate with the Companies Commission with regard to the use of pharmacy titles, and to ask the Lord Chancellor of Ireland to secure jury exemption for registered druggists (p. 413).

THE second reading of the Pharmacy Bill is receiving the attention of the trade, as is shown by our Winter Session reports (p. 392), but in Parliament there is little expectation that it will be reached on March 24. It has not yet been blocked. Our Parliamentary representative sends notes of an interview that he has had with the managing director of Harrod's Stores, who is not a chemist, and does not propose to become one (p. 382).

English News.

Local newspapers containing marked items of news interesting to the Trade are always welcomed by the Editor

Brevities.

On March 7 a defendant at Bangor Police Court ascribed his drunkenness to imbibing too large a quantity of sweet spirit of nitre.

An establishment for opium-smoking, called the Pyrolytic Institute, has been opened in London. The promoter, a medical man, states that the Institute is for medical treatment only.

At Newcastle Bankruptcy Court on March 6, on a creditor's petition, a receiving-order was made against Barry Noble, late of Heaton Hall Road, Newcastle, chemist and druggist.

In Stepney last quarter three samples of camphorated oil and two samples of olive oil were analysed under the Sale of Food and Drugs Act, and all were genuine except one sample of olive oil, which proved to be cotton-seed oil.

At Marylebone Police Court on March 4, John Appleby, clerk, was remanded on a charge of stealing a bottle of quinine tonic and a box of bronchial lozenges, value 5s., from Adam Beith, chemist, 35 Hampstead Road, N.W.

Messrs. Brunner, Mond & Co., Ltd., chemical manufacturers, Northwich, have offered to send thirty-eight apprentices to the technical day-classes for apprentices which the Northwich Education Committee propose to establish. No expense would fall upon the students.

At Dartford County Court on March 1, Mr. Frank Cox, chemist and druggist, Swanley, was sued by a man named Bennett for 100l. damages for personal injuries caused by being knocked down by defendant's motor-cycle. Judgment was given for plaintiff for 40l., and costs.

At a meeting of the Court of Common Council of the Corporation of London on March 3, Mr. Redding put a question to the Remembrancer (Mr. Adrian Pollock) regarding the draft Pharmacy Bill. The Remembrancer promised to bring up a report on the Bill on a future occasion.

At Pontefract on March 6 two soldiers and a shoemaker were sent to prison for one month each for being concerned in larceny at the warehouse of Mr. Alfred Collins, chemist and druggist, Corn Market, and stealing several bottles of wine and some soaps, pills, and Pontefract cakes.

At Durham Assizes on March 6, Mrs. Sarah Bell, of Sleaford, claimed for money lent from Mr. Septimus Hall, described as a chemist (but whose name is not on the Register of Chemists and Druggists) of Esh New Wimming. Defendant counterclaimed for damage for breach of promise of marriage. The jury found for the plaintiff for 89l. on the claim and also on the counterclaim.

In Monday's "Daily Telegraph," under "Engagements for the Week," was: "4.30 Wednesday.—Conference on 'Alcohol in relation to Commercial Efficiency.' Mansion House." This somewhat startling announcement turns out to be a select conference of men convened by the National Temperance League. Sir Victor Horsley was the moving spirit, not Mr. Tyrer.

A Coroner's jury at St. Leonards-on-Sea on March 2, returned a verdict of "Death from chronic alcoholism" in the case of Marian Williams, wife of James Williams, described as a chemist, residing in Pevensy Road, St. Leonards. A medicinal tablet was discovered and the inquest adjourned for an analysis of the contents of the stomach. The borough analyst stated that the tablet contained no poison, and he found no sign of poison in the organs.

The Australian Mails.

The position with regard to the question of the Australian mails is still unchanged, says Reuter. It is understood that the Orient Pacific Company, after the last fortnightly departure from London on March 10, will seek employment for some of its steamers elsewhere. Consequently, a revival of the weekly service of mails in the near future is very improbable.

Circulars for Australia.

The chief Post Office at St. Martin's-le-Grand has issued the following note:

The Australian Post Office has announced that the Customs duty leviable in Australia on circulars, price lists, and other printed papers may be paid by the senders directly to the Deputy Postmaster-General at Melbourne, Sydney, Adelaide, Perth, Brisbane, or Hobart, as the case may be. The Federal authorities advise exporters to weigh the articles in bulk before posting, assess the duty thereon at 3d. per lb., and remit the amount in a letter stating for what reason they make the payment. The covers of the articles should be stamped with the name and address of the sender, and a statement that the duty has been sent to the Deputy Postmaster-General concerned. This inscription may appear on the addressed side of the cover, provided it is confined to the left-hand half.

Echo of the Cod-liver Oil Case.

The Finance Committee of Chelsea Borough Council reported on March 6 having considered a claim from the public analyst (Dr. S. Rideal) amounting to 9l. 9s.—viz., 6l. 6s. for attending the Sessions on two occasions to support his certificates of the analyses of samples of milk and cod-liver oil, and 3l. 3s. for attending a consultation at the Council's solicitors. The Committee found that no reference is made in the terms of Dr. Rideal's appointment to the question of attending court to support his analyses, and decided that he be offered 7l. 7s. (two days' attendance in court at 3l. 3s. per day and 1l. 1s. for attending the consultation) in settlement of the account. Further, the Committee has fixed the fee for all future attendances in court of the public analyst at 2l. 2s. per day.

Fire.

An explosion occurred on March 7 at the premises of the New Pegamoid Co., Ltd., Marshside Factory, Lower Edmonton. The explosion took place in the magazine shed used for the drying of nitrated cotton, and this building was totally demolished. The cabinet shed, used as a store for drying cotton, and the mixing shed were also wrecked, and practically the whole place was blown to pieces, brickwork flying in all directions. A good deal of camphor, nitrated cotton, and methylated spirit formed part of the stock, and the camphor fumes were very deadly. One man who had been removed to hospital is not expected to recover, and there is some uncertainty as to whether any persons have been buried in the ruins.

Volunteers Wanted.

The British Homeopathic Association is about to commence a series of drug-testings on men and women. All necessary modern appliances and methods will be used in the conduct of provings. Already several offers of provers have been received, but a few others would be welcome. Suitable subjects receive, at the end of the proving, remuneration at the rate of 1l. per week. Application should be made by letter to the Hon. Secretary, B.H.A. Provings Committee, 82 Wimpole Street, W.

The Mineral-water Trade.

One of the important functions connected with the mineral-water trade of Great Britain is the annual banquet of the London Mineral-water Bottle Exchange and Trade Protection Society, when representatives of most of the provincial associations comprising the Mineral-water Alliance attend. The result for many years has been a remarkable re-union, and the speeches have been extremely practical, inasmuch as they have shown the efforts that all had made to conduct business on fair and profitable lines. The prices agreements, bottle-charging, and the advantages of bottle-exchanging have been advocated and actually adopted as an outcome of these gatherings. But there is to be no such dinner this year, not because the good work mentioned has all been accomplished, but, it is feared, through depression in trade. It is to be hoped, however, that a good warm summer in 1905 may tend to a resuscitation of the re-union in 1906.

Xylonite and Celluloid.

Manufacturers of xylonite and celluloid goods should note that a memorandum has been issued by the Home Office dealing with the measures of precaution required in the storage and use of these commodities. It is recommended that where large quantities of xylonite or celluloid are stored fireproof rooms should be provided; where

xylonite or celluloid is used, or temporarily stored, the material not in actual use should be kept in metal or other fireproof receptacles; that xylonite or celluloid shavings or dust should not be allowed to accumulate on the floors, but should be swept up daily and placed in receptacles of non-inflammable material, not in the sacks or wooden boxes now commonly employed for the purpose. The use of naked lights should be avoided as far as possible; where cutting or sawing of xylonite is done, the saw or other cutting-instrument should run in water, or by other means be kept thoroughly cool; the shanks of tools used for boring the scales for table knives and forks should be of such form as to avoid friction caused by contact with the material bored; in addition to a supply of water, buckets filled with damp sand should be kept at hand in constant readiness in every shop in which xylonite or celluloid is being worked, in order that any accidental fire may be immediately smothered before it attains serious proportions.

Chemists' Licences.

An off wine-licence has been granted to Mr. William Bates, chemist, 147 Above Bar, Southampton.

A wine-licence has been granted by the Mold justices to Mr. Robert Barker, chemist and druggist, Buckley.

At the Preston Brewster Sessions a month ago the Licensing Committee directed the consideration of chemists' wine-licences in the town to stand over until the adjourned Licensing Court. On that occasion the Chairman (Mr. W. P. Park) commented somewhat strongly on what he described as the abuse of the licence by some of the holders in selling other than medicated wines, and inquiries were directed to be made into the matter. On March 8 the adjourned Licensing Sessions were held, and the report of the officer who had conducted the investigation was presented. It stated that there were seven chemists in the town with wine-licences. The majority had used them in the spirit in which they were granted—viz., to sell wine medicinally—but at 179 Friargate (Martin's Drug Stores) a wholesale trade in wine had been conducted at certain seasons. The officer called the manager's attention to the matter, and his answer was that he had a licence to sell wine. A new manager had since been appointed, who had promised that there should be no such sale. A similar thing occurred at 34 Church Street, in a somewhat less degree. The inspector added that several of the leading chemists in Fishergate assured him they never had any need for a licence. One said that although he had held a licence for seven years he had never had more than a pint of wine in at one time, and that he had never sold sufficient to pay for the licence. The applications of the present holders of chemists' wine-licences—Mr. J. E. Walker, Mr. E. Woodward, Mr. W. Forrest Livesey, Mr. T. Barnes, Mr. E. H. Holden, and Martin's Stores, Ltd.—for renewal were then granted without further comment.

The Sultan and the Chemist-Mayor.

There are some black men at Cambridge University—was it not a St. John's man who, after returning to his cannibal island, selected another joint for dinner when he recognised that the one chosen for him was a man wearing his College colours? Anyway, there are four there now, who, with a white man, played a trick on the chemist Mayor of the town last week, which has resulted in some entertaining reading in the daily papers. The Mayor (Mr. Campkin) received a telegram from London, purporting to be from the representative of the Sultan of Zanzibar, saying that he was to visit Cambridge on Thursday, March 2. Would the Mayor show him buildings, etc.? In due course four black men and a white interpreter arrived, the latter saying that the Sultan had been unable to come, and had sent his uncle, Prince Mukasi Ali. The party were gorgeously attired, and were received by the Mayor and Town Clerk at the Guildhall, then taken to a bazaar and to the principal colleges, the whole thing being done in good style, the visitors showing the keenest interest in the sights and expressing their deepest thanks to the Mayor for his courteous reception. Bidding him good-bye, they made their way to the station, where the "Prince" behaved in an extraordinary manner, and he and his three dark companions left the station, got

into a hansom, and drove away into the country. The rest may be told in the words of the "Daily Mail":

When interviewed, Mr. Campkin, the Mayor, was still in ignorance of the real state of affairs, and in describing the visit, repeatedly expressed his regret at having been unable to receive the visitors more fittingly, saying that if he had had longer notice he would have communicated with the Vice-Chancellor of the University and summoned the members of the Corporation.

What really happened after the Prince and suite had driven away was this: They went to a pre-arranged spot, and, doffing their gorgeous robes, made their way back to their rooms. On the day following certain of the party again came up to London and returned to a well-known costumier the garments which they had hired for the occasion.

The Cambridge student who impersonated Prince Mukasi Ali granted an interview to the representative of a local journal on Monday night. Asked how the Mayor and the Town Clerk received them, the "Prince" remarked, "Oh, we had only to grunt, and they bent their heads and welcomed us." The reason why they did not return to London was because suspicion would have been aroused by their having been out of college until so late. Although the Mayor has been thus cleverly victimised, his conduct throughout has been in every way admirable. That his Worship derived nothing but amusement from the incident may be gleaned from the fact that he laughingly informed our correspondent of it early on Saturday morning, advising him to see the "Daily Mail" account for himself. He added that he had suspected in some degree the genuineness of the party, but he had been unable to verify his suspicions until too late. In the meantime hospitality was the clear duty which devolved on a Chief Magistrate, and it is curious to note, as showing that the undergraduate tricksters had studied the legal aspects of their action, that no refreshment of any kind was accepted.

Birmingham Notes.

The enthronement of Bishop Gore was the cause of many pharmaceutical absentees from business on March 2. Many of the brotherhood occupy high positions at the several churches, and their presence at the Pro-cathedral was necessary.

Mr. H. W. Jones's lecture has given quite a fillip to urine analysis, and many inquiries are being made regarding the cost of apparatus for conducting such work for medical men.

Miss Ethel Newell, who has secured the dispensership of Worcester Infirmary, is from the General Hospital, Birmingham, and attended a local pharmacist's tutorial classes. She has the Minor and Hall certificates.

The Jesse Boot prize scheme to enable employes of the company to get tuition for the Minor is eagerly competed for annually. The value of the scholarships are in total 175*l.*, and two local men, Messrs. Griffiths and Room, have been successful.

The death is announced of Mr. Thomas Ryland-Erdington, the pioneer of the chemical-manure industry. Mr. Ryland-Erdington began to make bone-superphosphate after studying the works of Boussingault and Liebig about 1842. At that time his firm of Procter & Ryland employed as their chemist Dr. Francis Wrightson, a pupil of Baron Liebig.

Cannot the local Association arrange a series of lectures on botany, chemistry, etc., at their evening meetings delivered by University "dons," in much the same way as the Birmingham Association of Gardens? The lecture by Dr. A. J. Ewart to this Association the other day, which was attended by Professor Hillhouse and others, was beautifully illustrated by limelight views, and proved a great treat.

Photography has held a prominent place in our midst during the week, what with an exhibition by a leading photo-company, demonstrations by Dr. Dixon at the Masonic Hall, and the Photographic Exhibition at the Society of Arts Rooms. At the last-named demonstrations are given by Dr. Dencer Whittles with his electric projection-lantern, and by Mr. Ratcliffe on the application of liquid air to photography. It has meant good business to the pharmacists and photographic dealers.

The Optical Convention.

The Papers Sub-Committee invite those interested in the science and practice of optics to submit papers for reading at the Convention meeting to be held about May 31. The Secretary (Mr. S. D. Chalmers), the Northampton Institute, Clerkenwell, E.C., would be glad to hear from anyone interested in the subject. The papers already promised are:

Dr. Glazebrook.—Presidential Address.
H. Denis Taylor.—Some Properties of Lens Systems.
Walter Rosenhain.—Mechanical Design of Instruments; some Problems relating to Optical Glacs.
Dr. C. V. Drysdale, S. D. Chalmers.—Introduction to a Discussion on Aberrations.
Dr. W. Etlles.—Colour Vision.
Dr. C. V. Drysdale.—Binoculars.
J. Gordon.—Diffraction in Optical Instruments.
F. Twinnan.—Some Modern Spectroscopes.
J. H. Blakesley.—Some Optical Measurements.
Conrad Beck.—Not yet fixed.
W. Dixey.—Tangential Astigmatism.
H. L. Taylor.—Accommodation in Astigmatic Cases.
J. A. Baugh.—Base Line Measuring Apparatus.
J. H. Sutcliffe.—Ophthalmometers.
Dr. R. M. Walmsley.—Education in Optics.
H. Beck.—Lens-testing Bench.
H. S. Ryland.—Tools and Materials.
Professor Forbes.—Spectroscopic Vision.
Professor Poynting.—Parallel Plate Micrometer.
Dr. Watson.—Fused Quartz for Optical Purposes.

Sheffield Notes.

Mr. W. M. Cooper, pharmaceutical chemist, Sheffield, who was recently engaged in the laboratory of the Pharmaceutical Society, is taking up a position with Mr. John A. Mitchell, chemist and druggist, of St. Mary's Road, Marningham, Bradford.

Mr. M. T. Miner, pharmaceutical chemist, of Highfields, made one of his rare appearances on the concert-platform as a 'cello soloist on March 7, at the annual concert in connection with St. Mary's Church. In addition to playing the obligato to one of the songs, Mr. Miner took part in Mendelssohn's trio in D minor, and also (according to the "Sheffield Daily Telegraph") "delighted the audience in a solo 'Scene de la Czarinas.'"

The Local Secretaries for Sheffield have been in communication with the members of Parliament for their respective districts, in accordance with the request of the Registrar. Several replies have been received. Mr. James F. Hope (Brightside) has informed Mr. H. Antcliffe that he was certainly glad to keep his eye on the Bill in which Mr. Antcliffe was interested, "but," he adds, "I am sure that in the position in which it is, it will not stand much chance if it is seriously opposed. Perhaps, however, it will be so fortunate as to be treated as non-contentious." Perhaps! Sir C. E. Howard Vincent, C.B., has informed Mr. George Squire, Ph.C., that he will certainly give all the attention he can to the Bill, according to his request.

A Sheffield chemist had a rather disturbing experience recently. A woman rushed into his pharmacy in a state of great excitement, saying that an inspector had been to her house and told her that she was poisoning her child with the pharmacist's stock "cooling-syrup." She inquired very anxiously if she was in any way liable if anything happened to the child. It appears that a lady inspector had called at the house, and noticing a bottle of "cooling-syrup" (labelled "Poison") on the mantelpiece, had asked to see the baby. She then told the mother that she was poisoning her child, and finished up by asking for another bottle and taking a sample away for analysis! The cooling-syrup is on the lines of Godfrey's cordial, and contains $\frac{1}{2}$ oz. of opium in every 2 gals. It has been made in this particular business for the last generation or two. Developments are awaited with considerable interest.

Cheap Iodide.

At West Ham Police Court on March 3 Edward Franks, George Jones, Charles Cole, and Henry Curtis were charged with being concerned together in stealing a quantity of iodide of potassium, valued at 6l. 10s., the property of Messrs. Howards & Sons, Ltd., chemical manufacturers, City Mills, Stratford. The first-named prisoner was in the employment of the prosecutors as a labourer. In that capacity he had access to the poison-room, in which was kept iodide of potassium. The police evidence was to the effect

that Franks admitted that he took five packets from the poison-room and gave them to Jones, who is a chandler in Duckett Street, Limehouse. He had four lots before; Jones asked him to get him iodide of potassium. Curtis and Cole were arrested for being in the unlawful possession of iodide of potassium. On inquiries being made it was discovered that Cole was in the employment of Messrs. Parren, Harveys & Co., of Giltspur Street, E.C., and as a consequence he was charged with stealing it. They appeared at the Guildhall Court, but after a statement made by Cole, in which he said that the iodide of potassium did not come from Parren, Harveys & Co., although it was stolen, they were discharged. Both were then re-arrested and taken to West Ham. The same day Jones was seen by two police officers. Since the proceedings commenced the prosecutors have taken stock, and find a deficiency of over 1 cwt. of iodide of potassium, valued at about 75l. All the prisoners pleaded guilty, and were each sent to gaol for three months.

Contracts.

The Westminster City Council has accepted the tender of Messrs. Heydon Harold & Co., 118 Weston Street, S.E., for the annual supply of disinfectants.

The Hackney Borough Council has renewed for one year, at existing prices, their contract with Adcock, Easton & Co., Finsbury Park, N., for supplying carbolic acid and carbolic powder to the Public Health Department.

The Guardians of the parish of Marylebone have accepted the tender of Messrs. Thos. Hodgkinson, Presten, & King for drugs for the half-year (309l. 2s. 10 $\frac{3}{4}$ d.), and that of Messrs. S. Maw & Sons (256l. 13s. 10d.) for druggists' sundries.

The Watch Committee of the Sheffield City Council have recommended the acceptance of the tender of Messrs. Clark & Co., chemists and druggists, of West Street, for the supply of oils, paints, etc., for the half-year, the amount being 52l. 4s. 2d.

The Battersea Borough Council has divided the contract for the annual supply of disinfectants to the Public Health Department between the "Sanitas" Co., Bethnal Green (17 items), and the Formalin Hygienic Co., Ltd., 3 Lloyds Avenue, E.C. (2 items).

The Chelsea Borough Council has accepted the tender of Messrs. Dussek, Bros. & Co., Verney Road, S.E., for the annual supply of carbolic disinfectants at the following prices: carbolic acid (98 per cent.), 9d. per gal.; ditto (30 per cent.), 3d. per gal.; carbolated cresote (25 per cent.), 6 $\frac{1}{2}$ d. per gal.; and refined carbolate acid (20 per cent.), 6d. per gal.; carbolic powder (15 per cent.), 2l. 10s. per ton; chloride of lime (10 per cent. available chlorine), 3l. per ton.

The Lambeth Borough Council has accepted the following tenders for the annual supply of special articles for the Sanitary Department: Sulphur candles, Messrs. Adcock & Co., Finsbury Park, N., and the "Sanitas" Co., Ltd., Bethnal Green, 36s. per gross; $\frac{3}{4}$ -lb. tins of carbolic powder (10 per cent.), Messrs. Adcock & Co., 13s. 6d. per gross; Izal, Messrs. Newton, Chambers & Co., Gray's Inn Road, W.C.—4-oz. bottles 38s. per gross, 1-gal. drums 6s. each; Okol, the "Sanitas" Co., Ltd.—4-oz. bottles 35s. per gross; "Cylin," Jeyes' Sanitary Compounds Co., Ltd., 64 Cannon Street, E.C.—1-gal. drums 6s. each; drain-testers, the "Sanitas" Co., Ltd., 48s. per gross.

The Metropolitan Asylums Board have accepted tenders from the following firms for annual supplies: Drugs—Messrs. C. J. Hewlett & Sons, 35-42 Charlotte Street, E.C.; druggists' sundries—Messrs. Burgoyne, Burbidges & Co., Coleman Street, E.C.; clinical thermometers—Messrs. S. Maw, Son & Sons, Aldersgate Street, E.C.; surgical appliances—Messrs. S. Maw, Son, & Sons (10 items), Messrs. Burgoyne, Burbidges & Co. (5 items), and Messrs. Down Bros., Ltd., St. Thomas's Street, S.E. (1 item); disinfectants—Messrs. Burgoyne, Burbidges & Co. (3 items), J. F. Percival, Valentine Place, Blackfriars Road, S.E. (2 items), J. Houghton & Sons, Bartholomew Close, E.C. (2 items), Adcock, Easton & Co., Charteris Works, Finsbury Park, N. (2 items), Middleton Bros., St. George's Street, E. (2 items), Pryke & Palmer, Upper Thames Street, E.C. (1 item); soda—F. Walker & Co., 25 Crutched Friars, E.C.

Irish News.

Local newspapers containing marked items of news interesting to the Trade are always welcomed by the Editor.

Domestic Trouble.

The wife of Mr. James Corcoran was at the Dublin Northern Police Court required to give a security of 10*l.* or, in default, to go to gaol for seven days for an assault on her husband. The solicitor for the prosecution said he did not think the woman, who is separated from her husband, is in her right mind.

The Photographic Convention

will meet in Dublin in July next, and recently a meeting of the Reception Committee was held in the Leinster Lecture Hall, Molesworth Street, Dublin, under the presidency of the Earl of Rosse, K.P. Sir Edward Grubb and Mr. J. A. C. Ruthven were appointed Hon. Treasurers, a number of sub-committees were appointed, and the following resolution was unanimously adopted: "That this meeting approves of the action of the Photographic Society of Ireland in inviting the Photographic Convention of the United Kingdom to hold its annual meeting for 1905 in Dublin, and pledges itself to use every effort to secure the success of the Convention."

Dealing with Empties.

The new regulations of the Local Government Board as regards the return of empties are now exercising the attention of Boards of Guardians. In most instances the suggestion to provide stock bottles has been approved of. At the meeting of the Trim Board of Guardians the medical officers said some one should be specially employed to look after the return of the empties. As a general rule, when the time came for empties to be returned several of the bottles contained a little of the drugs unused. These had to be transferred to other bottles and re-labelled, and this was a task which generally took so much time that the medical officer could not devote sufficient attention to it.

Scotch News.

Local newspapers containing marked items of news interesting to the Trade are always welcomed by the Editor.

Watching.

In reply to a note from Mr. Andrew Naysmith, chemist and druggist, Arbroath, calling his attention to the second reading of the Pharmacy Bill on March 24, the Right Hon. John Morley replied: "Thanks for your note upon the Pharmacy Bill. I will watch for it."

Private Conference of Glasgow Chemists.

A special meeting of the chemists and druggists of Glasgow and West of Scotland took place in the Grosvenor Restaurant on Thursday, March 9. The President of the Pharmaceutical Society was present and addressed the meeting. Several prominent Scottish pharmacists also discussed the organisation scheme of the Society and the present political position and prospects of pharmacy.

A Mearns Inventor.

Mr. John Reid, M.A., foreign editor of the "Star" and "Morning Leader" of London, and inventor of a new incandescent light, is a son of the late Mr. John Reid, chemist, Montrose, and a nephew of the late Mr. Neil Reid, chemist, Perth. Mr. Reid's light (which was shown recently at the Royal Institution, London) is produced by two jets of acetylene gas and two of oxygen gas impinged together in the atmosphere. No "mantle" is required, and a signalling-lamp apparatus for extreme distances is likely to be taken up by the Admiralty and the India Office. An adaptation of the light has been tried in some of the London hospitals for the treatment of non-malignant skin-diseases.

No First Preference for Rates.

Lord Low pronounced judgment on March 6, in a note by the liquidators of the Scottish Drug Depot (Limited), Edinburgh, for the purpose of barring their remuneration fixed; for authority to take credit for such remuneration and to pay the law expenses received by them; for approval

of their deliverances; and for authority to pay the preferable claims and to divide the surplus funds among the ordinary creditors. Answers were lodged for the Collector of Poor-rates for the City Parish of Edinburgh. The amount due in respect of these rates by the Scottish Drug Depot was 20*l.* 0*s.* 6½*d.* The liquidators ranked the claim as a preferable debt. The Collector, however, was not satisfied with a preferable ranking, but maintained that the rates ought to have been paid out of the first proceeds of the estate and preferably to all debts of a private nature, including the liquidators' fees and the expenses of the winding-up. Lord Low dismissed the answers for the Collector and found him liable in expenses.

Business Changes.

Mr. W. E. Taylor, the representative of Messrs. Burroughs Wellcome & Co. in Scotland, has severed his connection with this firm.

Messrs. Doig & Son, chemists and druggists, Dundee, have disposed of their branch business in Albert Street to their manager, Mr. William Sinclair Moir.

Mr. A. Cruickshank, chemist and druggist, Musselburgh, has disposed of his branch business at Ferry Road, Leith, to Mr. Andrew H. Paterson, chemist and druggist.

The offices and stores in connection with Glendinning's Beef and Malt Wine have this week been removed from 81 Commercial Street, Dundee, to 81 Ingram Street, Glasgow.

Mr. James Bisset, chemist and druggist, Burntisland, has taken into partnership Mr. Andrew Gilmour, chemist and druggist, formerly of Lonsight, Manchester, and the business will be carried on as Bisset & Gilmour.

The partnership between Mr. David Allan, chemist and druggist, Musselburgh, and Mr. William Messer, trading as the Edinburgh and Leith Aërated Water Company, has been dissolved, Mr. Allan having retired from the business, which will be carried on by Mr. William Messer and Mr. James Messer.

The shop in Maitland Street, Newhaven, recently occupied by Mr. J. G. Anderson, has been dismantled, and the fittings, etc., dispatched to the country. At Montrose Terrace the shop tenanted by Mr. J. McInvoy has been closed for some weeks, and the contents are said to be ready for transfer to Fife at an early date.

THE WEEK'S POISONINGS.

EIGHT deaths from poisoning have occurred during the week in England and Wales, two are reported from Ireland, and one from Scotland. Only two of these were misadventures, carbolic acid being given in mistake for medicine to Lieut. Davenport, of Oxford Terrace, W., by his wife, and a Sunderland child, named McCulloch, drank a fatal dose of sulphuric acid. At the inquest on Lieut. Davenport a jurymen said the evidence in the case showed that it was another illustration of the inaction of the authorities and its consequences. If the Home Office would make it compulsory to put poisons in specially shaped bottles such accidents would never happen. He thought something ought to be done. Three of the poisonings in England, one in Wales, and one in Ireland were caused by carbolic acid. The English victims, besides Lieut. Davenport already mentioned, were Mrs. Blagg, an elderly widow, of Langwith, and John Prescott, of Salford. The Welsh suicide took place near Llandaff, an unknown woman being found in a field dying from carbolic poisoning. Three oxalic-acid suicides occurred in England: one at Bentham (the suicide being James Armstrong, a coal merchant), another at Marylebone (where it was taken by Elizabeth Holbrook, a bootmaker's wife), and the other at Poplar, where a boiler-maker named McGrath killed his son and then poisoned himself with the acid.

In Ireland the death of Mrs. Carolan, of Crossenlough, co. Cavan, was due to carbolic acid, self-administered. William Watson, of Dromore, co. Down, a coal merchant and urban district councillor, died from strychnine-poisoning, the Coroner's jury returning an open verdict.

Mr. George Villiers Mann, of Leith, a well-known solicitor, and secretary to Leith Hospital, was found dead with a glass that had contained prussic acid beside him.

French News.

(From our Paris Correspondent.)

PENNY POSTAGE FOR FRANCE.—M. Rouvier, Minister of Finance and Prime Minister of France, has stated that as soon as the Budget is voted he will submit a project for the reduction of letter-postage rates, which may come into force on October 1 next. It is supposed that the penny rate will be applied to letters up to 10 grams; as a matter of fact, the majority of letters posted in France are under this weight. Other postal reforms, it is hoped, will be inaugurated at the same time.

A BURGLAR IN A PHARMACY.—Louis Hebat, laboratory porter at Rogier's Pharmacy, 3 Boulevard de Courcelles, Paris, was about to retire to rest one night last week when he heard a noise in the shop. He turned and saw a man at the till, whom he promptly seized and threw down, but the burglar, biting his hand severely, compelled him to loose his hold and escaped. Some 4*l.* was missing from the till, the rest the thief had not had time to pocket. Unfortunately the darkness of the shop prevented Hebat from giving any description of the individual.

M. LEXTREIT RETIRES.—After twenty years' service as director of practical chemistry at the Paris School of Pharmacy, M. Marius Lextreit has just applied for the pension to which he is entitled, and has taken leave of his appreciative pupils. He is now seventy-five years of age, and is a native of the Ardèche Department. In 1874 he was appointed head pharmacist of the St. Antoine Hospital, Paris, but he gave up his post there last year. Professors Bouchardot and Jungfleisch were present at M. Lextreit's last lecture (after which they made their "formal adieux"), and nearly the whole of the students of the school made a point of attending.

A PHARMACEUTICAL INCIDENT.—A friend in Algiers tells me that the pharmacy staff at the Civil Hospital there have attracted public attention by reason of an incident between the chief of that department and one of his assistants. It seems that a few days ago a woman was brought to the hospital who had swallowed a solution of corrosive sublimate. No eggs or other form of albumen was kept in stock at the dispensary, so the dispenser had to forage round the wards for some and a precious hour was lost in the search, the case ultimately proving fatal. To exonerate his responsibility the dispenser reported the circumstances to the superintendent, who referred the matter to the chief pharmacist for an explanation. The latter summoned the dispenser to his room and, after an angry altercation, gave him a black eye, either defensively or offensively, and this led to the matter being taken up by the local papers, with the inevitable result that the public criticise adversely an administration which does not provide a proper supply of antidotes. The alleged assault will form the subject of a magisterial inquiry. How pleasant it is when brethren dwell together in harmony!

A FRENCH P.A.T.A. PROPOSED.—The Lorette plan of price-protection adopted by certain French manufacturers of pharmaceuticals, though limited in its action, appears to be working satisfactorily. M. Lafont, of Dijon, seeks to organise a sort of French P.A.T.A. ("Union de pharmaciens pour la réglementation de la spécialité"), the committee to be formed of one-third manufacturers of proprietary medicines, one-third Parisian pharmacists, one-third provincial, with triennial election. An adhesive stamp is proposed to be placed on the protected articles: blue for those sold at marked prices, red for those on which a reduction (not to exceed 10 per cent.) could be allowed. These stamps could be sold at a centime apiece and would be the revenue of the Union. Each adherent would sign a paper accepting certain engagements not to substitute, or compete with, protected articles, to sell at the protected prices, etc. The local "syndicates" or pharmaceutical associations would act as police. The success of such a scheme depends, of course, on the more or less hearty manner in which it is taken up. The promoters claim that it combines the advantages of the system of the late M. Thomas, of Agen, which, they state, was approved of by 7,000 pharmacists, and of M. Thebault, of Paris. Up to the present every price-protection scheme here has

fallen through or been very partially adopted, there being a feeling among a certain (and probably large) class of pharmacists that to protect proprietary prices is to assure the prosperity and growth of the proprietary system, which (rightly or wrongly) they look upon as the bane of modern pharmacy in France.

Colonial and Foreign News.

"LA REVISTA DE FARMACIA," of Madrid, has been dropped, after an existence of three years.

A NEW PHARMACY has been opened in Kasr-el-Nil Square, Cairo. It is called the "Windsor Pharmacy." A full stock of English and foreign proprietaries is kept, and prescriptions are prepared according to the British Pharmacopœia.

PHARMACEUTICAL SOCIETY OF JAPAN.—Among the papers recently communicated to this Society was one by Mr. K. Tachiki on the relative merits (from the point of view of profit) of cold extraction or percolation in the manufacture of tinctures. Mr. Tachiki discussed the opinions of European pharmacists on the subject, and the conclusion he came to was that when extractive power alone is compared, the percolation method is preferable. Mr. H. Iwasaki, in a paper on the estimation of magnesia in cement, recommended the adoption of Lunge's method as the most simple and trustworthy.

RUSSIAN NOTES.—It is announced that in the St. Petersburg pharmacies, where it has been decided to introduce the system of two shifts per day, thus necessitating an increase of the staff, the proprietors refuse to employ Jew assistants, and skilled men are scarce.—The "Pharmatzevticheski Journal" announces that the St. Petersburg chemists and wholesale drug-store proprietors have agreed to supply gratis medicines and bandaging material to the value of 3,625 roubles for the use of the sick and wounded who return from the war to reside in the district of St. Petersburg. Five of them have agreed to take turns on the premises of the special committee appointed for the organisation of this service, to manage the distribution of the medicines. Numbers of provincial chemists also contributed to the common fund, and a still greater number offered to supply medicines at discounts varying between 10 per cent. and 50 per cent. The journal publishes a long list of local pharmacists who supply the committee with the medicines and bandaging material at very great reductions.

DANISH NOTES.—The manufacture of cod-liver oil in Iceland has been tried apparently with successful results. The Iceland cod-liver oil put on the market in Copenhagen is said to be of as good quality as the best Norwegian oil, and the price is no higher. Only small quantities have up till now been available.—An "Ambulance class" has been started at the Pharmaceutical Institute in Copenhagen to give first-aid instruction to pharmacists. The class is conducted under the supervision of a medical man.—The Minister of Justice has brought forward a Bill against the use of saccharin and such-like bodies in the manufacturing of foodstuffs and flavourings. The prohibition includes saccharin and all artificial sweeteners of a strength greater than that of beet sugar or of cane sugar. It is proposed to exempt such articles as are prepared solely for medicinal purposes.—In consequence of the spread of a disease among pigs which has caused great harm to the farmers, the Ministers of Home Affairs and of Justice have given permission to the manager of the "Trier" privileged pharmacy to sell cod-liver oil with phosphorus to the Slaughter-house Co-operative Company, which in turn is permitted to retail the oil to its shareholders. The Medical Law in force prohibits chemists from selling cod-liver oil combined with phosphorus without a prescription from a qualified medical man or a qualified veterinary surgeon, so the President of the Danish Chemists' Association immediately took steps to have the same right extended to other chemists. Some of the unlicensed druggists ("Materialister") have without permission, or trying to obtain such, begun to sell cod-liver oil with phosphorus. So it is expected that the Minister of Justice will be obliged to move in the matter. The permission for the chemists has not yet been obtained.

Current Views on Export Trade.

Being Notes on a Series of Interviews with Leading Export Merchant Shippers and Others.

"HOW is business?" This common enough question is answered in so many ways that if there were a spectroscope of sound the tintinabulations would give as brilliant a display as the solar spectrum.

"The Board of Trade Returns tell you nothing," said one large shipper. "We are certainly doing a big volume of trade; but, my good fellow, what are we doing it for? Prices are lower, so is commission; I am doing more than ever and making less."

Another struck a platform attitude—right hand out, left thumb in waistcoat—as he said: "No fear of British trade. It's built up on a bed-rock of confidence in British honesty, and that's what the nations appreciate. Of course, we work for less so far as import trade is concerned, but there's little to grumble about in regard to exports."

These are fair representations of opinion on both sides so far as general trade is concerned. In the future there is to be less room for middlemen. It is no longer possible for a clerk without capital to set up for himself as an export agent, and make a living by it straight away. So far as the chemical and drug trades are concerned, the present position is well depicted in the following series of notes, based on many interviews.

Australasia.

Recently a better feeling has set in with regard to export trade to Australia, as may be judged from the fact that orders to buy have been more frequently cabled over instead of mailed. This may be taken as an indication that money is circulating more freely, as the result of more bountiful harvests. The commercial situation "down under" is, of course, dominated by the labour party, and they are not slow in showing themselves masters of the situation. In fact, the cry among the workers is still

Eight hours' work,
Eight hours' play,
Eight hours' sleep,
Eight bob a day.

The consequence is that capital to some extent is subservient to labour, and this in certain instances has prevented the development of local industries. There is a tendency for Australian houses to become less dependent on the Mother Country for finished products, and the erection of new factories for the manufacture of chemicals is on the increase. The question of preferential trade is still agitating the people, and advises all point to the fact that the predominant sentiment in Australia is undoubtedly in favour of giving preference on English imports, but they wish to give first preference to themselves, and after that to give Great Britain a preference over the foreigner. In a word, the current phrase is, "The workers on the Yarra before the workers on the Thames, but the workers on the Thames before the workers on the Rhine." It will be remembered that the importation of preventives is now prohibited in Australia, as a result of the findings of the Birth-rate Commission, but the embargo placed upon them has not affected the sale of such goods. Indeed, we understand it has led to the development of quite a local industry, and that the sale is as rampant as ever.

New Zealand, said an exporter, is now at her high-water mark of prosperity, but the outlook for trade there is still good. The patent-medicine question is the topic of the hour in the drug trade, and at the present time all exports from this country have been stopped pending further developments. Some of the loudest complaints against the new proposals have come from the colonial newspaper proprietors, who have for the time being lost a fruitful source of revenue. The imports of patent medicines into New Zealand average about 50,000*l.* per annum, and by far the larger proportion consists of British exports, the American makers supplying some 17,000*l.* annually.

China.

Business with the Chinese markets, said a leading exporter of drugs and chemicals to the Far East, is of fair

average volume, and may be said to be of a jog-trot character, varying little from year to year. Competition everywhere is keen, but we adapt ourselves to circumstances and readily meet it where necessary. As regards the character of the drug business in China, we found there is a growing tendency for the natives themselves to keep open shop. They usually acquire their knowledge as dispensers at some hospital in the leading treaty-ports, afterwards beginning to settle down in the provinces and taking a keen interest in their business. It is a curious fact that several of the leading pharmacies with European names are financed by Chinese, who, in fact, are practically the owners. There is very little scope at the present time for extending the drug business in China, as the trade is almost entirely in the hands of a few large firms with offices in London and branches at the various treaty-ports, who are able to supply the Chinese with everything they want in the way of cheap medicines. Such firms are of course fully alive to the interests of the Chinese markets, and it is not likely they will allow business to slip through their fingers. To those who make a speciality of Chinese trade it is possible to derive profit by having a trustworthy traveller always on the spot; and the distances are so great and the business so meagre that it pays in a few isolated instances only. As for the establishment of branch houses in China, the amount of trade to be done does not warrant it, as that country is only a small consumer of British drugs, considering the extent of her territory. There has been so much talk about the "opening up of China" that the phrase has almost passed into a byword in commercial circles. China has been opening up for the past five-and-twenty years, but the rate of progress has been slow, and its future still remains one of the most interesting problems of the day. The obstacles to reform are too well known to be reiterated here, and until the Chinese Government interest themselves more in the expansion and development of the resources of the country by the total abolition of all internal taxation on merchandise, as well as the improvement of the means of communication, the rate of progress will continue to be slow.

India and Ceylon.

One of the best markets in the world is afforded by India, which is growing wealthier in the sense of buying imported goods, because textile manufacturing is being developed in the country at a rapid rate. The drug-trade is changing but slowly, that is to say, the strictly English pharmacies do not multiply, as they are needed solely by the white people and richer natives. The bulk of the people get their medicines from bazaar druggists, who are becoming more numerous. They are keen buyers, because they are the keenest sellers in the world. Their buying is very largely done on the spot, a number of English firms having so comprehensive representation that the best that is going is quickly snapped up. German firms are now keen competitors, especially for certain chemicals, and do direct business with the bazaars. Trade is good at present.

South Africa.

The magnitude of the South African markets and the demand for British products have always forcibly appealed to exporters in the Mother Country, and since the Boer war greater attention than ever has been focussed upon the possibilities of trade with that country. According to the latest advice opinions are somewhat divided as to the present and prospective conditions of business. A large Cape Town house wrote by the last mail that in the present distressed condition of the country they did not feel justified in pushing business. This was in reply to a letter from a well-known British soap-house making suggestions for increased trade. In another quarter we were assured that although trade with South Africa at the present is not brisk there are indications of a slow but gradual improvement. Altogether there is a more hopeful feeling abroad,

and with the advent of spring a much larger volume of business is looked for.

In writing about business in South Africa it must be remembered that during and since the Boer war the prevailing commercial conditions were or have been abnormal. But there is one distinctive feature, and that is the drug-trade has borne up wonderfully well, and exceptionally few failures have been announced. This is, no doubt, partly owing to the help in the way of extended credit which has been given to those importing houses who found it necessary to enable them to weather the storm. These remarks, however, do not apply so literally to other trades, as the Bankruptcy Courts have been exceedingly busy. Throughout the whole of last year commercial activity from the other side was of an exceedingly cautious character, owing principally to the lack of ready money among consumers, who required necessities rather than luxuries. Consequently importers purchased nothing except for actual needs, and the boom that was confidently anticipated never came along. Rather was there depression, which however cannot have been so acute, considering that our exports of all goods to South Africa last year amounted to over nineteen millions sterling compared with twenty-seven millions in 1903.

One of the great evils which the importer has had to contend with, and against which loud complaints have been raised, is the large auction sales of surplus military stores to which reference has been made in *THE CHEMIST AND DRUGGIST*. Although the effect of this is passing away, there are still large surpluses (especially groceries) to be dealt with.

The importation of patent medicines to South Africa is a large and growing trade, but the question of sending out the goods unstamped still remains unsolved, although some firms now appoint trustworthy agents in the leading commercial centres, to whom they forward the goods unstamped on consignment. Others, however, decline to send their "patents" unstamped, excusing themselves on the ground that the stamps are a kind of guarantee of the quality of the medicines. On the other hand, American manufacturers of patent medicines have been making more strenuous endeavours to capture the trade than is generally suspected. Their medicines are unstamped, and this is regarded by retailers as an inducement to handle them. Several leading American patent-medicine houses have branches in South Africa, and those who cannot afford this relatively expensive method appoint commission houses, who introduce the goods to the retailer. Thanks to the tyranny of the shipping ring and the rebate system, the effects of low freights from New York has had a very prejudicial effect on British trade, for not only has it enabled American manufacturers to develop trade in South Africa, but often British exporters have found it necessary to buy in New York for shipment to South African houses. Similar remarks apply to Germany, with its bounty-fed steamers and "through" bills of lading. Apart from the demand for German-made chemicals in South Africa, that country supplies the bulk of the glycerin and cyanide of potassium imports, over 1,400 tons of the latter product having been imported last year. The preference of 2½ per cent. accorded to British goods under the Customs tariff has not helped British trade much, and in several quarters it is recognised that the preference is wholly inadequate to stem the tide of foreign competition.

It seems likely that with the growth and development of local wholesale drug-houses in South Africa exporters will have to adapt themselves to new and changing conditions, as there is a growing tendency to obtain supplies on the spot, especially in the up-country districts. Many new industries are springing up, especially in the Orange River Colony where, as the result of recommendations made by the Industrial Commission, it has been decided to give bonuses (whether wisely or not) every three or five years. It will therefore be seen that if we are to retain our hold upon South African trade every nerve must be strained.

The Wholesaler's View.

In the course of this inquiry we have been assured that the British wholesale exporter of drugs is well able to hold his own against those houses who claim to do business for 2½ per cent. commission. Of late years there has been a considerable increase in the number of houses transacting this kind of business. It has been a comparatively easy

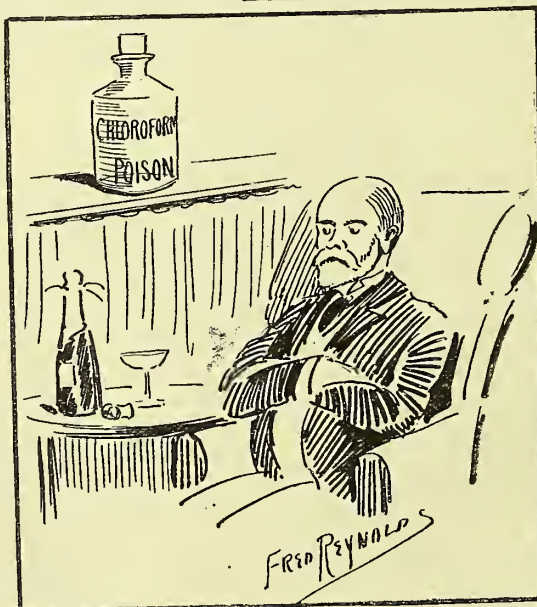
matter for a man with small capital to rent an office, engage a clerk with some knowledge of the drug-trade, and commence business on his own account. When he gets an indent for drugs accompanied by a banker's draft or letter of credit, he usually sends out quotations for the articles to, say, half a dozen houses, and the lowest quotation invariably secures the orders which are, of course, divided among a number. In many instances, however, such orders are filled with goods of secondary quality, as must be the case where price is the first and only consideration. Moreover, such orders, unless they come from first-class commission houses, are usually looked upon as of less importance and never take precedence over indents received direct by the wholesale druggist. Again, if any disputes arise, as they frequently do, they are not so readily adjusted, because such commission-houses have no practical knowledge of the intricate requirements of a druggist's business, and are thus unable to appreciate what a wholesaler has probably taken a lifetime to acquire.

Although it is about fifteen years ago since the "freight paid and packages free" business was initiated, it has not found favour in the eyes of the majority of export druggists in this country, and by many it is regarded as of a speculative nature owing to the fluctuation in freights and their varying character according to the port or steamer.

Our Town Traveller.

Inquiries have been made independently by Our Town Traveller, who addressed himself chiefly to wholesale druggists and druggists' sundries houses who have export as well as home connections. His notes will be found on the page following.

The Kaleidoscope.



Too Old at Sixty.

In reference to Dr. Osler's recent joke about the lethal chamber for those over sixty, the "Oxford Magazine," in extending a welcome to him, prints the following pathetic epigram, which was found inscribed in blood on the walls of the old Clarendon Building:

Brother! I am sixty-one,
So my work on earth is done.
Calms should follow after storm,
Reach me down the chloroform.

THE Italian "Corriere della Sera" of February 11 states that the returns of Italy's foreign trade during 1904 show imports of 1,858 million lire (1s. 9½d.), or a decrease of three million lire. The exports amount to 1,615 million lire, or practically ninety-eight million more than in 1903.

Our Town Traveller.

KNOWING that this issue of THE CHEMIST AND DRUGGIST is the export merchant shippers' one, I have directed my inquiries of late to those channels of information which were likely to supply something of special interest in that connection. From

MAW'S EXPORT EXPERT

—Mr. Laing—I learnt regarding the general conditions that it will not improve until the Russo-Japanese War is over. This has not only affected business in the Far East, but has hindered the development of export trade to all other parts of the world. Australia, with its puzzling protective duties and Labour Ministry in power, is in a somewhat parlous state. Business men are chary about exporting until they see what is going to happen next. The same applies in a measure to New Zealand, which market, like the Australian, is having the close attention of German and French houses, and Japan, too, has become a competitor difficult to touch. Thus a firm of manufacturers went from this side to Japan, and there produce a toothbrush at 3d. which would cost 9d. to make here. Australia gets the benefit of that. In spite of competition, prohibitive duties, and what not, a large business in Maw's goods is still being done in the Antipodes. With Canada business continues steady. The United States show a decrease, mainly on account of prohibitive duties; but with South America prospects are decidedly brighter, and actual business has been much greater during the past decade. Thus "Maw's Cold Cream" is now exported to the Argentine and other places in pots with labelling and directions in Spanish. Trade with the West Indies is also on the up grade, and in India it has trebled in a decade. Maw's have a direct representative in India, who, in turn, has agents at each of the principal ports, and Mr. Laing speaks well of the honesty of native traders. Maw's goods are a well-established feature of South African trade, and Mr. Laing sees decided improvement in that country in recent months, and has rosy hopes for the future.

Mr. H. E. Stevenson, of Baiss Bros. & Stevenson, Ltd., Jewry Street, E.C., said his company are "not too busy in exports, but they are not grumbling," which is equivalent to

A STATE OF SATISFACTION.

The troubles in South Africa have had a damaging effect on general export business; English houses like doing business with South Africa, their customers being mainly their own countrymen, and there being no insuperable tariffs as yet. "There are many signs of awakening in South Africa," said Mr. Stevenson, "and much talk about it, but actual business is not yet great enough to make one enthusiastic." Mr. Stevenson's personal experience of the Australasian Colonies enables him to speak with authority, and he considers that the Federation is pursuing a very short-sighted policy with varied tariffs and taxes. He is particularly severe on the tax of 3d. per lb. recently imposed on printed price-lists, etc., entering the Colonies, pointing out that, apart from the annoyance caused to British houses (which seems a strange commentary on the suggested preferential treatment to the Mother Country), the tax is bound to be harmful to colonial traders themselves. Fewer catalogues, etc., will enter Australia, and Mr. Stevenson is a firm believer in the success that follows careful attention to price-lists and trade advertisements. Leaving general topics, we discussed and sampled a new consignment of eucalyptus oil which the company have just received, and I had a look at the latest "own name" specialties, which include Dr. Mackenzie's Malted Food and Milk Food, attractively put up and showing big profits for the retailer. The "Circloid" series (Nesbit's and Concentrated Apol) are going well, and "Concentrated Vinegar-essence" (Stevenson) is now so popular that it is increasingly subjected to "the sincerest form of flattery."

"EXPORT TRADE,"

said Mr. E. J. Millard, of C. J. Hewlett & Son, Charlotte Street, E.C., in response to my query, "very good all round, and South Africa decidedly picking up." As Mr. John C. Hewlett was in South Africa during the stirring times of the proposed duty on tinctures, and "Hewlett's" is in keen

touch with South African trade generally, this confirmation of progress in our latest accessions is satisfactory. Referring to the tincture duty proposed—and rejected—Mr. Millard pointed out that the Customs Convention will undoubtedly have a stronger and more carefully prepared scheme before them at the next meeting, which will probably be carried; so that the trouble is only shelved for the time being, but if no preference is given to Cape over British houses in the amount of duty to be paid the British manufacturer will have no room to grumble. Speaking of Canadian trade, Mr. Millard said that the preferential treatment to Great Britain is in reality no preference at all. British manufacturers of galenicals are in exactly the same position as German or French, seeing the duty is on the alcohol. Thus Hewlett's special preparations are liable to duty. Business is good in India. The trouble with Labour Parliaments and taxes on price-lists and so forth are extremely bad for business in Australasia. Messrs. Hewlett get over the difficulty of the price-lists by paying the duty to each colony to the Postmaster direct, and having each copy marked "Customs duty paid" before sending out. In connection with business in South America Mr. Millard says it has to be done carefully with as much surety as can be obtained regarding the *bona-fides* and financial stability of the customer. He spoke enthusiastically of business in the West Indies, and as to South America said goods can be shipped to Panama from London at cheaper rates than from the United States.

THE BOTTLE-TRADE.

Messrs. Johnsen & Jørgensen, Ltd., Bury Court, E.C., have a big export business in heavy glassware, aerated-water bottles, wine bottles, and so forth, besides the chemists' bottle business of H. Poths & Co., which has a connection with South Africa, India, Australia, and other countries. Mr. Trondsen, one of the directors of the company, informed me that so far they have not derived much benefit from the "better feeling" in South Africa, but the trade with India is steady. As for Australia, Mr. Trondsen is of opinion that the bulk of the glass-bottle trade is done with Germany direct. The trade in South America is done mostly by France and the United States. Mr. Trondsen showed me, as an earnest of that opinion, samples of French-made medicine-bottles of good quality that someone had brought him that morning, part of a large order for a drug house in Rio de Janeiro. He pictured genially and graphically the difficulties of doing business with the average South American business man, who is usually "too tired" to be worried about orders. He thinks his stock is complete until some morning he discovers that there are no 2-oz. bottles in stock. Then he gets into a state of temporary activity, and telegraphs to New York or somewhere else for an immediate supply. Then he returns to repose. Unlike knowledge,

A LITTLE OPTIMISM

is not a dangerous thing, and I got some of it from Mr. Wynter, of Lynch & Co., Ltd., Falcon Square, E.C. He is quite satisfied with the general condition of export trade. Some Colonies are better than others, but in the aggregate export trade in druggists' sundries and surgical appliances is steadily increasing all over the world. The rise in the price of rubber has affected the "Lynchgate" commodities considerably, and so sure are Messrs. Lynch & Co., Ltd. that the price is likely to remain up that all rubber goods have been advanced, and the advances are to be enforced. In the showroom I saw the new "Simplacto" hygienic feeder, and some beautiful designs in celluloid boxes for puff, soap, and manicure. The lids are embellished with embossed cherubs flying in a rainbow-tinted air. A stronger set of puff-boxes in celluloid are hand-painted in front and on top. Another set of toilet-powder bottles have lids with coppered rims and china medallions for centres with hand-painted Dutch scenes or the arms of various Colonies depicted thereon.

MR. EUGENE SCHROTTKY, the well-known indigo chemist, writes to the "Indian Planters' Gazette" that he has decided to give up research work in indigo. This decision, he says, has been greatly influenced not only by the little encouragement which the planting community gave to his proposals regarding the introduction of the synthetic process, but also in even a greater degree by the way in which the patent case was fought out. (See C. & D., June '8 and 25, 1904, pp. 955 and 995.)

Legal Reports.

Trade Law.

The Aspirin Patent.—The hearing of the action by the Bayer Company against Von Heyden and another, in respect to the manufacture of acetyl salicylic acid, has been delayed by the recent China mine case, but it will, we understand, come on shortly. The action is creating considerable interest in wholesale circles.

Expert Evidence in Scientific Cases.—When a judge is called upon to determine a cause involving trade questions which depend for their solution upon an accurate and intimate knowledge of the particular trade involved—*e.g.*, a question of chemistry or of patents in machinery—it is usual for a technical expert to be called in to assist the Judge. A question has arisen as to the extent of the value of such expert advice; when the Judge has given his decision based upon it, the case may go to the Court of Appeal. Is the Court of Appeal to be influenced by the same advice? This was, in substance, the question raised recently in a case before the Court of Appeal, in which the original judgment had been framed upon the advice given to the Judge by a distinguished F.R.S. Counsel urged that the Court of Appeal should not read the assessor's opinion; and the Master of the Rolls decided that he and his brother Judges would consult with the other members of the Appeal Court as to the procedure. Subsequently his Lordship announced that this had been done, with the result that all were agreed that the reading of the assessor's opinion was necessary and proper.

Insurance of "Dangerous Trade" Premises.—When premises are insured against fire by their owner, and are then leased to a tenant under a covenant to the effect that the latter will not by himself or by his assigns carry on or allow to be carried on any offensive trade, nor do or allow to be done any act which may make voidable the policy of fire insurance, the tenant's sub-tenant will be liable to an injunction if he carries on any business upon the premises in contravention of the covenant referred to. Such was the finding of the Chancery Court in a recent case wherein a sub-tenant took into stock for sale a number of lamps which were illuminated with a mixture of petrol gas and air, alleged to be of a highly explosive nature. The insurance company concerned came down upon the landlord with a declaration that his policy was void so long as these lamps were kept on the premises and refused to renew. The premises remained uninsured for some time, and subsequently another company took up the risk at a premium six times as large as the original one. The injunction asked for by the landlord was granted by the Court, the covenant in the original lease being held to bind the sub-tenant.

High Court Cases.

IMPORTING PATENTED DYES.

In the Chancery Division on Saturday, March 4, before Mr. Justice Buckley, the plaintiffs in the *Badische Anilin und Soda Fabrik v. Wolfensberger* moved for judgment in default of defence. Mr. J. C. Graham said that the action was brought to restrain infringement of two patents, one of which had been certified. The statement of claim alleged that the defendant had imported dyestuffs which infringed plaintiffs' patents, and the breaches were set out. The minutes were in the ordinary form, and asked that the defendant, his servants, agents, and workmen, might be restrained during the terms respectively for which the letters patent were granted from importing into this country, manufacturing, selling, or supplying in this country, any dyestuffs manufactured according to the letters patent.

His Lordship: Have you any allegation that he manufactures?

Mr. J. C. Graham: I do not think so.

His Lordship: You can only restrain him from what you allege he is doing. He has entered into contracts for sales, and used samples. You can take that.

Mr. Graham said he would strike out "manufacturing." The plaintiffs also asked for an inquiry as to the damage sustained by reason of the defendant having infringed the patents and an order for payment of the amount found due, the costs of the inquiry to be reserved. Plaintiffs also asked for an order for the delivery up to them of all infringing goods imported or brought into this country by the defendant, and the costs of the action.

Mr. Justice Buckley made the order as asked.

"SHAMROCK" TRADE-MARK.

In the Chancery Division of the Dublin High Court on March 4, before Mr. Justice Barton, the case of *Alex. Finlay v. Charles Patterson* was mentioned by Mr. Jefferson, B.L. Counsel said he appeared for the plaintiff, a soap-manufacturer, of Victoria Square, Belfast, and he asked his Lordship to make a rule of Court a consent which had been entered into restraining the defendant, who carried on business at 160 Lisburn Road, Belfast, from infringing the plaintiff's trade-mark known as the "Shamrock" brand. Mr. Jefferson said that the plaintiff had already got an injunction against the Shamrock Company restraining them from using the registered trade-mark of a shamrock on soaps, washing-powders, etc., but, notwithstanding that injunction, the defendant (after notice) continued to sell goods bearing the infringing labels. In the consent the defendant now undertook to be enjoined from using the word "Shamrock" on labels on goods other than the plaintiff's manufacture, and he also agreed to pay the plaintiff's costs. Mr. Justice Barton made the consent a rule of Court.

Sale of Food and Drugs Acts.

SWEET SPIRIT OF NITRE.

At the Halifax Police Court on March 7, Fred Jagger, grocer, Haley Hill, was summoned for selling sweet spirit of nitre which the Borough analyst (Mr. W. Ackroyd) certified to be 52 per cent. deficient in ethyl nitrite. The Bench imposed the nominal fine of 5s., including costs.

CAMPHORATED OIL.

At the Liverpool City Police Court on Wednesday, March 8, before the City Stipendiary (Mr. W. J. Stewart), James Woodend, chemist and druggist, 22 Pitt Street, was summoned for selling camphorated oil which was deficient in camphor.

It was stated that a sample taken from the defendant's premises contained camphor 15.8 per cent. (instead of 21.4 per cent.) and olive oil 84.2 per cent. The defendant said the camphor evaporated, but the difference was so slight that a purchaser of a shilling's worth of the oil would lose about one-eighth of a farthing. The Stipendiary said he could not help that. If the law was silly he had to enforce it all the same. There would be a fine of 10s. and costs.

Medicine-stamp Act, 1812.

AFTER A WARNING.

At Blackburn on March 1, Richard Hardman, a Darwen herbalist, was fined 2l. 10s. and costs in each of two cases brought by the Commissioners of Inland Revenue for selling a dutiable medicine unstamped and without a licence.

Mr. Dart, for the prosecution, stated that the offence was committed at Oswaldtwistle on January 30. On that day a handbill was left at the house of Mr. Martin P. Doyle, Inland Revenue officer, which set forth that certain ointments were the best possible cure for sore, hot and burning feet, eczema, scurf, scurvy, and a host of other things. The defendant's name and address were at the bottom of the circular, and a few hours later in the same afternoon he called to see if the officer wanted any ointment. Mr. Doyle purchased two boxes for 3½d. (unstamped), and Hardman admitted that he had no licence. He had been warned by the Commissioners in August last.

Bankruptcies and Failures.

Re ELLIOTT BAXTER STORM, 7 and 8 The Corner, Farnborough, Kent, Chemist and Druggist.—The statement of affairs filed in this case discloses gross liabilities amounting to 562l. 16s. 9d. (of which 555l. 13s. 1d. is unsecured), and net assets 303l. 4s. 1d. It appears from the report of the Official Receiver that the debtor was formerly in business as a chemist in Lincoln, and that in or about 1886 he executed a deed of assignment for the benefit of his creditors, under which a dividend of 4s. in the pound was paid on debts amounting to about 500l. In 1903, he further states, he executed another deed of assignment for the benefit of creditors at Worcester, where he carried on business as a mineral-water manufacturer. A dividend of 3s. in the pound was paid on debts

amounting to about 800*l*. The debtor states that he started business as a chemist at No. 7 The Corner, Farnborough, in August, 1903, with a capital of 15*l*. in cash, and that in the following month he obtained from his landlord the sum of 100*l*. and the fixtures at No. 8 The Corner to enable him to start business as a grocer. The landlord has obtained judgment for 216*l*., being the above-mentioned sum of 100*l*. and the value of the fixtures. The creditors shown as partly secured hold the lease of the debtor's premises, which the debtor estimates of no value. Part of the furniture on the premises occupied by the debtor is claimed by his wife as her separate property, and the remainder is claimed by the debtor's brother-in-law, who, it is stated, purchased it from the trustee under the deed of assignment executed by the debtor in 1886. The debtor informs the Official Receiver that the only books he has kept are a cash book, an invoice book, and a creditors' ledger. They have not, however, been balanced during the three years preceding the receiving order. The alleged causes of failure by debtor are: "Insufficient capital, and the result of the action instituted against me for a sum of 100*l*. and the value of the fixtures at my grocery business, which cash and fixtures I claimed had been given me." The following are creditors: Burgoync, Burbridges & Co., London (29*l*.); Henderson & Liddle, London (11*l*.); Hubbard, Farnborough (216*l*.). The first meeting of creditors was held on Wednesday at 24 Railway Approach, London Bridge, S.E., under the presidency of the Official Receiver (Mr. A. S. Cully), when it was resolved that the estate should remain in the hands of the Official Receiver to be wound up. The Official Receiver reported that he had kept the businesses open with a view to sale as a going concern. The landlord had met him very fairly, and had agreed to grant separate leases of the grocery and chemist businesses if purchasers were found, and offers had been received, but were of no avail. An offer was also received from the landlord, but the Official Receiver declined it, as in his opinion the stock, etc., would realise more by sale.

Re THOMAS ARTHUR WINGFIELD (trading alone as "Wingfield & Co."), Wholesale and Retail Chemist and Druggist, late trading with a partner under the same style at 20 Great Clowes Street, Lower Broughton, Salford.—Accounts have been filed under this failure showing gross liabilities 2,129*l*. 14*s*. 9*d*. (of which 1,489*l*. 17*s*. 3*d*. is unsecured), and net assets 980*l*. 7*s*. 7*d*. Debtor has been adjudged on his own petition, and he has intimated that he has no intention of making a proposal for a composition. At the date of the receiving order seven creditors were suing him, ten others had recovered judgments against him, and six executions were in course of process against him. The debtor states that he started business in 1900, in partnership with Mr. Thomas Redford White, as wholesale and retail chemists, etc., and wine and spirit merchants, at 20 Great Clowes Street, Lower Broughton, Salford. The firm's name was "Wingfield & Co." Neither the debtor nor his partner had any capital at the time; they accordingly borrowed 400*l*. (which sum is still owing) to enable them to purchase the stock, fixtures, and goodwill of the business referred to, the agreed price being 500*l*. The entire purchase-money was paid within twelve months. Mr. White subsequently introduced 80*l*. into the partnership, which was dissolved on August 11, 1904, the debtor taking over the assets and liabilities, and paying his late partner 50*l*. (of which sum he has actually paid 24*l*.). Since the dissolution the debtor has carried on the business by himself, and in order to provide the necessary capital has borrowed 300*l*. on the security of a reversionary interest under his grandfather's will. The interest is also charged to secure a bank overdraft, which at the date of the receiving order amounted to 300*l*. There are a large number of creditors in both businesses, and the "contingent debts" are of a different character to what are usually so termed, being, in fact, the balance of unpaid liabilities in the partnership business. In the business carried on by the debtor alone there are 84 creditors, of whom two are for money lent, 130*l*. The two sets of creditors (excluding the creditors for money lent) number 157, and as their debts amount to 958*l*. only, the average amount of the debts is very small. The debtor appears to have opened accounts to a very considerable extent with a fresh set of creditors when he traded alone. The actual number of creditors common to both tradings is 29, and the total number of distinct creditors is 131. The Official Receiver employed the debtor as manager to carry on the business with a view of preserving the value of the assets and business generally. The debtor appears to have kept a fairly complete set of books. The cash book is, however, only written up to November 21, 1904, and the ledgers to December 31, 1904. The debtor states that he became aware that he could not pay his debts in full at the end of March, 1904, but that he has since then introduced 300*l*. borrowed capital on security belonging to himself, and 100*l*. borrowed without security. The debtor attributes his position to "Insufficient capital and bad trade." At the first meeting of creditors, held at the Official Receiver's offices, Byrom Street,

Manchester, on March 6. Mr. H. L. Price, I.A., Fountain Street, Manchester, was appointed trustee of the estate, with a committee of inspection. The Official Receiver, in opening the meeting, said there was a legal question involved in the bankruptcy, which arose consequent upon the partnership with Mr. T. R. White. Many of the creditors had proved for debts incurred in the partnership, and these could not vote that day. Only those creditors could vote whose claims were against the debtor since the dissolution of the partnership. Their claims, too, would take precedence of the claims of those for liabilities incurred prior to the dissolution. It was hard lines, but it was according to the Bankruptcy Act. The list of creditors was then read over, and included: Allen & Hanburys, Ltd.; Ashton & Parsons, Ltd.; W. E. Battersby; C. H. Bishop; Burroughs Wellcome & Co., Camwal, Ltd.; T. Christy & Co.; J. & J. Colman, Ltd.; Davies, Gibbins & Co.; the General Kaputine Syndicate, Ltd.; D. & W. Gibbs; T. Guest & Co.; Kodak, Ltd.; Liebig, Ltd.; Lupton Bros.; Manchester and Liverpool District Banking Co., Ltd.; G. Bateson; Parke, Davis & Co.; Southall Bros. & Barclay, Ltd.; Veno Drug Co.; J. F. Wilkinson; T. R. Wingfield; James Woolley, Sons & Co., Ltd.; Botwright & Grey, Ltd.; Hockin, Wilson & Co. The Official Receiver said none of the creditors' proofs were for large amounts. The bank's proof was for 294*l*. 3*s*. 8*d*., and their security was of the value of 200*l*.; 130*l*. was money lent. Messrs. Woolley's proof was for 80*l*. 7*s*. 4*d*., but was before the dissolution of partnership.

Gazette.

Partnerships Dissolved.

Adams, W., and Evans, J., under the style of Messrs. Adams & Evans, Cambridge, chemists and druggists.

Buckley, S., Holland, J., and Thomas, J., under the style of Buckley & Holland, ale and porter dealers and mineral-water manufacturers, Hyde, Cheshire, so far as regards J. Holland.

Ottway, W., and Ottway, L., under the style of J. Ottway & Son, St. John Street Road, Clerkenwell, E.C., opticians.

Parkin, F. B., and Whysail, G. E., Ripon, chemists and druggists.

The Bankruptcy Acts, 1883 and 1890.

RECEIVING ORDERS.

Samuel, Richard, formerly of Llanelly, but present address unknown, formerly practising as a surgeon.

Willis, Edwin Ernest, Littleport, Cambs., physician and surgeon.

New Companies & Company News.

BARTHOLOMEW CROSSLEY, LTD.—Capital 3,000*l*., in 1*l*. shares. Objects: To take over the business of grocers, patent-medicine vendors, drysalters, etc., heretofore carried on by B. Crossley at Burnley and elsewhere. The first directors are B. Crossley, P. Crossley, and Laura Crossley (all permanent). Registered office, 33 Westgate, Burnley.

NEW ANCHOR AND CROSS BOTTLE WORKS SYNDICATE, LTD.—Capital 6,500*l*., in 6,000 ordinary shares of 1*l*. each and 2,500 founders' shares of 4*s*. each. Objects: To carry on the business of glass bottle, jar, tube, and stopper manufacturers in all its branches, and to adopt an agreement between the Liardet Non-Refillable Bottle Co., A. C. C. Liardet, and R. F. Baker. The first directors are Colonel S. M. Benson, L. P. Montefiore, and W. H. Short.

THOMAS HEDLEY & Co. (1905), LTD.—Capital 70,000*l*., in 1*l*. shares. Objects: To acquire the business of Thomas Hedley & Co., Ltd. (incorporated in 1898), to adopt an agreement with the said old company, and to carry on the business of soap, candle, varnish and chemical manufacturers, druggists, makers and vendors of toilet requisites, disinfectants and proprietary articles, etc. No initial public issue. The first directors are O. C. Phillips, J.P., of Amroth, Pembroke; B. Phillips, and A. S. Swan. Qualification, 250*l*. Remuneration (except any salaried managing director), 50*l*. each per annum.

WILLIAM S. MCBRIDE ARTIFICIAL TEETH INSTITUTE, LTD.—Registered in Dublin. Capital 100*l*., in 1*l*. shares. Objects: To carry on the manufacture of artificial teeth and operative dentistry in all its branches. The first subscribers are: W. S. McBride, Londonderry, dental mechanic; W. Baxter, Londonderry, pharmaceutical chemist; T. Hamilton, Londonderry, grocer; Letta Hamilton, Londonderry, draper; J. Crawford, Londonderry, manufacturer; G. H. Johnston, Dublin, clerk; and Mrs. M. McBride, Dublin. Registered without articles of association. Registered office, 5 Queen Street, Londonderry.

WILLIAM PATTERSON ARTIFICIAL TEETH INSTITUTE, LTD.—Registered in Dublin. Capital 100*l*., in 1*l*. shares. Objects:

To carry on the manufacture of artificial teeth and operative dentistry in all its branches. The first subscribers are: R. Turner, Newtown Stewart, farmer; J. King, Derry, grocer; W. Patterson, Derry, dental mechanic; R. L. Black, Derry, clerk; J. McDermott, Londonderry, clerk; J. E. Maulstaid, Londonderry, builder and contractor; J. Donaghy, Londonderry, sanitary and heating engineer; and H. McCool, Londonderry, house painter. Registered without articles of association. Registered office, Strand Road, Londonderry.

ROBERT HASTINGS, LTD.—Registered in Dublin. Capital 500*l.*, in 1*l.* shares. Objects: To carry on the business of wholesale, retail, dispensing, manufacturing, and pharmaceutical chemists, etc. The first subscribers are: S. Macauley, Clare Lodge, Newcastle, co. Down, physician and surgeon; R. Magill, Newcastle, surgeon; R. L. Bell, Newcastle, physician and surgeon; T. A. Robb, 166 Manor Street, Belfast, chemist; A. Burns, 308 Newtownards Road, Belfast, secretary; Miss N. Hastings, Newcastle; A. Grogan, Belfast, teacher; Miss N. Grogan, Belfast, teacher; and R. Hastings, Newcastle, registered druggist. Registered without articles of association. Registered office, Newcastle, co. Down.

ELGEY, LTD.—Capital 2,000*l.*, in 10*l.* shares. Objects: To acquire and carry on the business of drug-merchants, patent-medicine vendors, and general store-keepers carried on by J. W. Elgey, as executor of the late James Elgey at 28 Market Place, Great Driffield, York, and to carry on the business of wholesale and retail manufacturing and dispensing chemists, druggists, opticians, manufacturers, and vendors of druggists' sundries, patent medicines, and proprietary articles of all kinds, medical herbalists, artists' colourmen, etc. The first subscribers are: J. W. Elgey, Lockwood Street, Great Driffield, grocer; Mrs. M. E. Elgey; Mrs. M. E. Crompton; Miss K. E. Wright; Mrs. A. E. Crompton; J. T. Elgey, Kilnwick Percy, York, farmer; and H. Elgey, Barnsley, bank manager. No initial public issue. The subscribers are to appoint the first directors.

DIXON & MAWER, LTD.—Capital 1,000*l.*, in 1*l.* shares. To carry on the business of chemists, druggists, manufacturers of drugs and medicines, manufacturers of and dealers in surgical and medical appliances, groceries and small wares, dealers in tobacco, wines and spirits, etc. The first subscribers are: F. Mawer, 5 Talbot Street, Nottingham, chemists' assistant; J. P. Dixon, Brougham Chambers, Wheeler Gate, Nottingham, architect and surveyor; H. Smith, 34 Pierrepont Road, West Bridgford, Nottingham, manager; L. A. Holbrook, 53 Stratford Road, West Bridgford, Nottingham, clerk; H. J. Hallam, 8 Low Pavement, Nottingham, house and estate agent; A. W. Bradshaw, Attenborough, Notts, architect; and Mrs. S. A. Mawer, 5 Talbot Street, Nottingham. No initial public issue. F. Mawer is managing director, and may retain office while holding 100 shares. Ordinary qualification, 25*l.* Remuneration of managing director, 104*l.* per annum.

REVIVINE, LTD.—Capital 3,000*l.*, in 1*l.* shares (600 6 per cent. cumulative preference, 1,000 ordinary, and 1,400 vendors' deferred). Objects: To acquire the business carried on at Stockton-on-Tees as the "Revivine Co.," to adopt an agreement with C. W. Watson, W. G. Harrison, and H. M. Poulter, to manufacture and deal in health salt and the anemia specific registered as "Revivine," and to carry on the business of manufacturing druggists, chemists, confectioners, essence manufacturers, etc. The first subscribers (each with one share) are: C. Freeman, North Ormesby, grocer; J. F. Stockhouse, Sunderland, advertising agent; C. F. Watson, Stockton-on-Tees, agent; W. G. Harrison, Forest Hall, merchant; E. Cook, Leeds, manufacturers' agent; H. M. Poulter, Lincs, manufacturing chemist; and F. E. Gough, Redcar, accountant. No initial public issue. The number of directors is not to be less than three nor more than five. The first are W. G. Harrison, C. Freeman, and F. E. Gough. Qualification, 100 shares. Remuneration as fixed by the company. Registered office, 13 Albert Road, Stockton-on-Tees, Durham.

WILLIAM JAMESON, LTD.—Capital 41,500*l.*, in 10,000 7½ per cent. cumulative preference shares of 1*l.* each, and 31,500 ordinary shares of 1*l.* each. Objects: To acquire the undertaking and all or any of the assets and liabilities of William Jameson, Ltd. (incorporated in 1897), to adopt an agreement with the said old company and H. C. Wilson, the liquidator thereof, and to carry on the business of manufacturers of and dealers in "Jameson's Arsenical Soap" and other toilet and household requisites, pharmaceutical, manufacturing, and general chemists and druggists, etc. The first subscribers are: H. More, 11 Canonbury Square, W., accountant; H. C. Church, 16 Agnew Road, Honor Oak, clerk; F. Robinson, 137 Saltram Crescent, W., retired Chief Inspector Met. police; H. Clark, 4 Spencer Terrace, Sunbury, boat builder; J. Shatwell, Shepherd's Bush, W., stationer; E. Snow, 94 Lower Kennington Lane, S.E., licensed victualler; and I. Coop, 92 Newington Butts, S.E., secretary. No initial public issue.

The first directors are H. More, H. C. Church, and F. Robinson. Qualification, 100 shares (or as fixed at statutory meeting). Remuneration, 75 guineas each per annum, managing director excepted. Registered office, 92 Newington Butts, S.E.

ABERDEEN COMBWORKS CO., LTD.—The report for the past year states that profits, including balance of 99*l.* brought forward from the previous year, amount to 9,839*l.* After paying a dividend on the 4½ per cent. preference shares, the directors recommend a dividend at the rate of 4 per cent. on the ordinary shares for the year ended December 31 last, carrying forward 268*l.*

OXYCHLORIDES, LTD.—The report for 1904 states that a new machine has been evolved during the year, and patents protecting the further improvements applied for; in addition to which patents have also been taken out covering the preparation of the solution as a disinfectant. The treatment of burnt ale, or spent lees, by the company's process was carried out in such a satisfactory manner that the system has been adopted, the distillers having purchased the machine and agreed to pay a royalty thereon. The value of the invention for the treatment of sewage has also been practically and successfully demonstrated under the supervision of Dr. Rideal.

ALFRED BIRD & SONS, LTD.—Mr. Alfred F. Bird, presiding at the general meeting of this company, held at Birmingham on March 7, said that during the past year the record of progress which had marked the history of the company had been fully maintained. The advance in the price of sugar affected certain branches of the company's business, but it was foreseen and provided for, to the greatest extent possible, by large "forward" contracts. In conclusion he pointed out that his agreement to act as chairman and managing director expired in June this year. The report was adopted. The year's profits amounted to 45,407*l.*, and a dividend of 15 per cent., with 2½ per cent. bonus, was declared.

BORAX CONSOLIDATED, LTD.—The report for the year ended September 30 last states that the profits for the period, after providing for all management and administration expenses, are 250,271*l.* Debenture interest for the year, the interim dividend on the preference shares, interim dividends on the ordinary shares, and income-tax to April 5, 1904, amounted to 108,244*l.*, leaving, with the amount brought forward, a sum of 152,663*l.* to be dealt with. The sum of 15,000*l.* has been placed to buildings, plant, etc., depreciation reserve account, and 5,825*l.* to credit of the debenture stock redemption sinking fund. The directors recommend a final dividend of 1*l.* each on the ordinary shares, making 17½ per cent. for the year, to writing off from the year's expenditure on exploration, inspection, and development of properties 20,000*l.*, and carrying forward 14,838*l.*

HENRY BISHOP & Co., LTD.—At the Edmonton County Court, on March 6, Walter Herbert Goss, of Freezywater, Waltham Cross, who was represented by Mr. Foa, barrister, petitioned for the winding-up of this company, which was incorporated in December, 1900, with a capital of 1,000*l.*, for the purpose of carrying on business as makers, proprietors, and vendors of all kinds of patent medicines, proprietary articles, and as general grocers. The petition set forth that the company was indebted to Mr. Goss, under a judgment obtained in the King's Bench Division on November 15, 1904, for 50*l.* arrears of salary, and 54*l.* 13*s.* 4*d.* taxed costs. Application had been made for payment, but without result. It is alleged that the company is insolvent, and that it has assets which consist of, *inter alia*, shops at 147 High Road, Lee, Kent; 479 and 742 Holloway Road, London; and 12 High Street, Harlesden, and an office at Forty Hill, Waltham Cross; the stock-in-trade at such shops, and certain proprietary articles of which the company was sole proprietors, including Smyrna Syrup of Figs and Zuroaline. Mr. Moeran appeared on behalf of the company, and raised a technical objection that the petitioner had not complied with the terms of the Act in regard to notice. His Honour adjourned the hearing of the petition for a month for proper notice to be given. Mr. Moeran said he would be prepared with evidence on the next occasion to prove that the company is not insolvent.

ANTIMONY IN THE PUNJAB.—The working of what is believed to be a large deposit of antimony ores near the Shigri glacier in Lahoul in the Punjab is about to be undertaken by European enterprise, a mining lease having been granted for the purpose by the authorities.

MICROBES IN DRINKING-WATER.—It was recently stated that M. Girard, Chemical Director of the Paris Municipal Laboratory, has discovered a new method for detecting pathogenic micro-organisms in drinking-water, and it is understood that he will probably apply his discovery to a new form of filter.

Business Changes.

Properly authenticated business notices (not being advertisements) are inserted in this section free of charge if promptly communicated to the Editor

MR. W. HOLT, chemist and druggist, is opening a business at Measham, near Atherstone.

MR. WHEELER has purchased Mr. F. S. M. Bosustow's business at 341 High Road, Chiswick, W.

MESSRS. SAUNDERS & JUKES have bought the business of Mr. E. C. Perry, chemist and druggist, Basingstoke.

BOOTS, LTD., are fitting-up branch businesses at High Street, Acton, W., and at High Street, Bromley, Kent.

MR. A. H. BELL, pharmaceutical chemist, has purchased the business of the late Mr. J. G. Agar at West Gate Mansfield.

MR. W. J. RUGG, chemist and druggist, of 69 Whitehorse Road, Croydon, has purchased a business at 45 Fore Street, Trowbridge.

THE business of Frank Tierney, Ltd., chemists, Marple, Cheshire, has been purchased by Mr. Robinson, who for some time past had been the manager of the concern.

MR. R. L. GRIFFITHS, chemist and druggist, of London Road, Croydon, has purchased Mr. Rugg's business at 69 Whitehorse Road, Croydon.

MR. DAVID ALLEN BRYAN, chemist and druggist, 118 Wilmslow Road, Withington, has disposed of his business to Mr. R. Ronosthorpe, chemist and druggist.

MR. J. BARRY HOPKINS, who for forty-five years has been in the surgical-instrument department of Messrs. S. Maw, Son & Sons, has taken a similar position with Messrs. Arnold & Sons.

MR. R. FRIEND STROUD, of Market Deeping, has acquired the business known as "Holland's Distillery" in that town, formerly in the occupation of John Richardson & Co., Ltd., of Leicester.

MR. WALTER ADAMS, chemist and druggist, has retired from the firm of Adams & Evans, chemists, of 116 Fitzroy Street, Cambridge, and the business will be continued in his own name by his partner, Mr. John Evans.

MR. E. THOMAS, chemist and druggist, of 188 High Street, Swansea, has bought the business of Mr. J. Richards, chemist and druggist, at 33 Castle Street, Swansea. Mr. Thomas still retains his business in High Street.

Marriages.

BOUND-SAUTEREAU.—On March 6 at Llandrindod-Wells, Holy Trinity Church, by the Rev. R. W. F. Singers-Davies, Rector, assisted by the Rev. J. A. Lewis, B.A., William Stanley Bound, chemist and druggist, Llandrindod-Wells, to Jeanne Pauline Valentine, third daughter of M. Jean Sautereau, 5 Quai d'Ivry, Ivry-Port, Seine, Paris.

MORRISSEY-MOLONEY.—At St. Mary's Church, Cahir, co. Tipperary, by the Rev. R. Power, P.P., Joseph P. Morrissey, L.P.S.I., to Margaret M. Moloney, of Castle Street, Cahir.

Deaths.

BAILEY.—At Reading on January 29, Mr. John Bassett Bailey, pharmaceutical chemist, aged seventy.

BERTS.—At Hastings on February 27, Mr. Samuel Betts, chemist and druggist, formerly of Smethwick, aged fifty-eight. Mr. Betts was formerly in business at Sutton-in-Ashfield, Croydon, and Smethwick, and on retiring from commercial life a short time ago he was succeeded by his son, Mr. Harold Betts.

HASLETT.—On March 4, at Belgravia, Belfast, Mr. John W. Haslett, one of the partners in the firm of J. & J. Haslett, chemists and druggists, North Street, Belfast. He was a brother of Sir Jas. Haslett, M.P., head of the firm.

HENSLEIGH.—At 24 Great Stanhope Street, Bath, on March 2, Mr. Henry Hensleigh, chemist and druggist (for many years with Hodder's, Ltd.), aged seventy-seven.

HEPPLE.—At Woolwich on February 19, Mr. Thomas Hepple, chemist and druggist, aged forty-four.

JONES.—At Tremadoc, Carnarvonshire, on March 8, Mr. Robert Isaacs Jones, chemist and druggist, aged ninety-two. Mr. Jones, who was invariably known by his bardie title, Alltud Eivon, was the oldest bard in Wales. His zeal as an Eisteddfodwr was remarkable, he being present at the last national festival at Rhyl. Mr. Jones was a distinguished antiquarian and author of many works on Welsh folk-lore.

McMULLAN.—On March 7, suddenly, Mr. Thomas McMullan, of the firm of Thos. McMullan & Co., wholesale druggists and warehousemen, Victoria Street, Belfast. Aged seventy. The deceased had been attending to business until Monday, when he had a paralytic stroke and died the following morning. He was born at Glastory House, Kirkcubbin, co. Down, and served his apprenticeship to the grocery business with Mr. Hamilton, Ann Street, Belfast, afterwards acting as traveller to the late Mr. Wm. Dobbin, J.P., wholesale druggist, &c. In 1860 he commenced business as a wholesale druggist in partnership with the late Mr. John Clarke, under the style of Clarke & McMullan. The firm was dissolved about twenty years ago, Mr. Clarke, in conjunction with his sons, forming the business now known as John Clarke & Co., and Mr. McMullan continuing in the old premises with his two sons as Thos. McMullan & Co. The business, which is one of the most extensive in Ireland, will be continued by deceased's three sons, William, Thomas, and Frank.

MILLER.—At Tyne View House, Winlaton, Mr. William Miller, chemist and druggist, aged seventy-five. Mr. Miller, who retired about ten years ago, formerly carried on business at Blaydon.

WOODALL.—At Bridlington on February 20, Mr. Robert Thomas Woodall, chemist and druggist, aged thirty.

Recent Wills.

DAY.—Mr. John George Day, chemical-broker, of Newcastle-on-Tyne, left estate valued at 1,312*l.* 4*s.* 6*d.* gross, the net personality being 607*l.* 2*s.* 8*d.*

DUNN.—Mr. John Dunn, of Messrs. Dunn Bros. & Co., Manchester, chemical and mineral merchants, left his estate, amounting to 43,626*l.*, among his children.

MAW.—Mr. Charles Maw, of Holmesdale, Nutfield, Surrey, of the firm of S. Maw, Son and Sons, of 7-12 Aldersgate Street, E.C., who died on January 5 last, aged sixty-nine years, left estate of the gross value of 342,065*l.* 16*s.* 3*d.*, with net personality 307,313*l.* 7*s.* 7*d.* Probate of his will, dated March 15, 1901, with two codicils dated respectively November 18, 1904, and January 2, 1905, has been granted to his sons, Mr. Charles Trentham Maw, Mr. Mowbray Trentham Maw, and Mr. Frederick Trentham Maw. The testator devised to the Parish Council of Nutfield his freehold field known as the "Vintage Field," for the use of the inhabitants of Nutfield as a recreation ground. The legacies include several hundred pounds to his servants. He bequeathed to his son Charles all his business promises in Aldersgate Street, and the reversion to his residence and lands at Nutfield absolutely. To his son Frederick he bequeathed 1,000*l.* and his leasehold residence and stabling 11 Chester Place, Hyde Park, and to his son George 500*l.*, freeholds at West Cowes, and at Egypt Hill, West Cowes, absolutely; and to his son Percival he bequeathed 500*l.* and his freeholds at High Street, West Cowes. He left 500*l.* each to his wife's half-sister, Annie Sharwood, to each of his nine daughters, and to Annie Julia Muzio and his son Arthur Trentham Maw. Subject to the bequest to his son Charles, he left his wife's jewellery for distribution among his daughters. To his late wife's half-sister, Mrs. Emily Sharwood, he bequeathed all his consumable stores, horses, carriages, live and dead farming stock at Nutfield and Eastbourne, 3,000*l.* and moneys on current account, and the use of his furniture and residences, and an annuity of 5,000*l.* during spinsterhood, chargeable upon his business. Subject thereto he left his share in the firm of S. Maw, Son & Sons, according to the terms of his partnership agreement. All the rest and residue of his estate he left to his sons Frederick, George, and Percival, and his said nine daughters, in equal shares as tenants-in-common.

Westminster Wisdom.

(From our Parliamentary Representative.)

THE POLITICAL OUTLOOK.

The Ministerial outlook has brightened to some extent during the past few days, and the talk of an early dissolution is no longer so persistent as it was last week. Two things have tended to strengthen the position of the Government. The fact that the Unionist majority fell as low as twenty-four last week gave Ministerialists a sharp reminder of the necessity of giving closer attendance to their parliamentary duties than they had hitherto displayed. Another cause of disruption, too, has been removed by the resignation of Mr. Wyndham. The Irish Unionist members were previously in a state of open revolt, and had practically withdrawn their support from Mr. Balfour. Now, however, they have returned to the fold, and there has been a corresponding improvement in the Ministerial majorities.

MEDICAL OFFICERS OF SCOTCH POORHOUSES.

A Bill has been introduced by Mr. Wason making the consent of the Local Government Board (Scotland) necessary for the dismissal of medical officers of poorhouses.

PHARMACY BILL.

No blocking motion has yet appeared on the papers of the House in respect to this Bill, and none is likely, as the Drug Companies Association think it unnecessary. There is one on the Town Tenants (Ireland) Bill, which stands first on the Orders of the Day for March 24, the Pharmacy Bill being third. It is not expected in the House that the Bill will be reached on that day.

MR. BURBIDGE ON THE BILL.

Mr. R. Burbidge, managing director of Harrod's Stores, said in an interview that, whilst he agrees that companies keeping open shops for the sale of poisons should have that portion of their business managed by a duly qualified chemist, he is certainly opposed to the suggestion that that chemist should be a director, as obviously unnecessary and an onerous and superfluous obligation. If the buyer or manager of such a department is a qualified chemist, with qualified dispensers under him, that, in his opinion, is all that is necessary. Mr. Burbidge went on to say that, in his opinion, it would be for the public benefit and safeguarding if the regulations contained in Paragraphs A, B, C, D, and G of the memorandum of the Bill passed into law. These include the provision that every shop shall be under the *bona-fide* personal conduct and supervision of a duly qualified person; that no poison shall be sold except in duly registered shops; that a register shall be kept of shops where poisons are sold and of the duly qualified chemists conducting the same; that prescriptions shall only be compounded by persons duly qualified to sell poisons; and the facilitation of the examination of persons anxious to qualify as chemists and druggists. As to the proposal to extend to corporate bodies certain of the provisions of the Pharmacy Acts from which they are exempt by reason of the decision of the House of Lords in the case of the Pharmaceutical Society v. the London and Provincial Supply Association, Ltd., Mr. Burbidge said he was not able to express an opinion at the moment, as he is not acquainted with the particulars of the case referred to.

PREVENTION OF CORRUPTION BILL.

The text of this Bill, to be introduced in the House of Lords by the Lord Chancellor, has been published. The Bill declares that any agent who corruptly agrees or attempts to obtain a reward from a third person for services in relation to his principal's affairs, is guilty of a misdemeanour. The person offering the corrupt reward, and any person who makes use of a false receipt or account to deceive the principal, are liable to the same punishment. The penalty provided is imprisonment with or without hard labour not exceeding two years, or a fine not exceeding 500*l.*, or both.

WEIGHING POSTAL PACKETS.

The Postmaster-General, replying to Colonel Welby on Monday, mentioned the interesting fact that postmasters are not bound to weigh letters and other postal packets for the public; they do so for the public convenience, and if they make any error (*e.g.*, short weight) it is the sender alone who is responsible. Nevertheless, when it is found that a

Post Office official has caused the insufficient postage, steps are taken to refund to the addresser the amount of the overcharge. Colonel Welby appears not to be satisfied with this reply, for he is asking the Postmaster-General to regard weighing as part service of postage paid.

THE BUDGET.

In answer to a question put to him by Mr. Lough, Mr. Austen Chamberlain stated on Wednesday that he was not yet in a position to fix a day for the Budget, but he thought it would be before Easter.

PROGRESS OF BILLS.

Advertisements Regulation Bill : Second reading in House of Lords on March 9. [This Bill of Lord Balfour's is intended to authorise local authorities to make by-laws respecting the exhibition of advertisements, such as dazzling lights, light or sound, and hoardings (height).]

Trade-marks Bill : Second reading deferred till March 15.

A Shop Clubs Bill was presented to the House of Commons on March 7 by Sir John Brunner and Mr. Bell.

Vaccination Bill : Second reading deferred till March 14.

Sunday Closing (Shops) Bill : Second reading March 14.

Personalities.

MR. THEO. H. WARDELOWORTH, F.L.S. (Evans & Sons, Ltd., Montreal), is now on a visit to England.

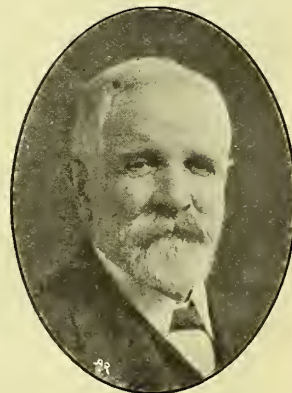
MR. R. FEVER CLARKE, of Gravesend, informs us that Sir Gilbert Parker, M.P., has promised to support the second reading of the Pharmacy Bill.

THE Grantham Town Council has appointed Mr. John Fillingham, pharmaceutical chemist, as Overseer for the parish of Grantham, and Mr. Bernard Beck Coppock, chemist and druggist, for the parish of Little Gonerby.

MR. BURTON MIDDLETON, Secretary of the Western Chemists' Association of London, desires to thank the many kind friends who have written in sympathy with him during his recent illness. Mr. Middleton is rapidly approaching thorough convalescence.

MR. F. G. EYRE, pharmaceutical chemist, of North Adelaide, Queensland, is now in this country on a short visit. Mr. Eyre served his apprenticeship to the drug-trade at Ilfracombe, but at the end of his apprenticeship his parents emigrated to Australia, and he went with them. Since then he has had wide experience of the Australian drug-trade. He disposed of his retail business in North Adelaide at the end of last year, in anticipation of his home-coming, and so far has spent his time here in visiting relatives. He is now in London for the purpose of negotiating agencies for home firms.

A WELL-KNOWN personality in connection with the bottle and sundries trade is being lost to London through the retirement of Mr. H. Poths, for reasons of health. Mr. Poths came to London from Stuttgart thirty-eight years ago, and soon after started in business on his own account as a bottle and box merchant under the trade name of H. Poths & Co., which latterly has been associated with Messrs. Johnsen and Jorgenson's business. Mr. Poths was the means of introducing a number of novelties to the British market, such as the now well-known vitreous-labelled shop rounds and pots, and a visit to his showrooms seldom failed to give one some new idea, either in respect to show bottles or the hundred and one little things that go to furnish those elegant "externals" which the dispensing chemist so much desires. Mr. Poths is now nearing his seventieth year, and as his health has not been good lately he and Mrs. Poths are to take up residence in her native town, Freiburg-in-Baden, where we hope they will have many pleasant days.



Observations and Reflections.

By XRAYSER.

Scheduling Carbolic Acid

has had a notable effect in reducing the annual records of poisoning by that substance "by accident or negligence." Carbolic acid was gazetted as a poison on September 2, 1901. The reservations which the Privy Council insisted on suggest that it is not so very bad a poison, and this tends to weaken the test then applied to the Pharmacy Act; but for all that the truth is established that scheduling can save lives. In the decade ending December 31, 1901, the total number of deaths in England and Wales from carbolic-acid poisoning, classified by the Registrar General as accidental, was 360, an average of thirty-six a year. In 1902, according to the same authority, the number of accidental deaths due to this poison had fallen to twenty-two, and now the statistics for 1903 show a further decline to twenty. This figure can be, and ought to be, reduced much lower. If the Pharmaceutical Council will administer the Act and the Regulations more stringently so far as carbolic acid is concerned, accidental poisoning thereby can be almost entirely prevented. It is both their duty and their interest to do this. Suicides are not so directly struck at by scheduling as accidents. The label "Poison" and the special bottle would be rather an incentive than a deterrent to a person resolved on taking his life; the only way in which he is checked by the scheduling is that he has to go to a particular shop for the article. The average number of suicides in the ten years 1892-1901 was 153. In 1902 and 1903 the numbers were 140 and 141 respectively.

Robert Hampson

well deserved the kind words which have been said of him since his death was reported. He was very earnest in his politics, and always anxious to help the weaker side. He went on the Council with some reputation as a revolutionist. This he scarcely maintained. His agitation for the abolition of voting for candidates for annuities was his best work, though it was entirely unsuccessful. Every one sympathised with him, but I am afraid the worldly-wise apologists for the appeal to the subscribers, incompatible though this may be with the truest charity, are accurate in their estimate of human nature. I knew a little, too, of the kind and patient thought which Mr. Hampson gave to old Cyrus Buott in his days of need. He not only collected the necessary money to provide for him, but saw carefully to the proper spending thereof. Mr. Hampson was associated prominently in the unfortunate opposition to the Poisons Regulations which caused the estrangement between pharmacy and the Privy Council. Manchester was the head-centre of the revolt, and Mr. Scott Brown, Mr. Woolley, and Mr. Hampson went on the Council to voice the general discontent. Probably, without being exactly conscious of it, the Manchester party was really fighting more against the oligarchy which was getting fairly well rooted at Bloomsbury than against the Regulations. Anyway, the rule of the select few was mortally wounded, and Mr. Hampson is entitled to a large share of the credit for this result. In conversation with him once, he happened to tell me that he was keenly interested in a certain Personal Rights Association, then unknown to me. I got the organ of the Association, "The Individualist," and found Mr. Hampson's name among the vice-presidents. The Association objects to State interference with the individual any further than is absolutely necessary for the

maintenance of freedom; it objects to the Tyranny of the Many over the Few as well as to the Tyranny of the Few over the Many (the capitals are quoted from the prospectus); and it demands the equality of all citizens before the law, regardless of wealth, birth, sex, culture, race, or religious belief. "The Individualist" writes contemptuously of all coercive legislation: I wonder whether, if the Pharmacy Act came under its observation, its sympathies would be with Mr. Leggett or with Mr. Bremridge.

Skiagraphy

and other practical applications of modern science are sometimes recommended to us as suitable and profitable adjuncts to pharmacy in these cutting days. That they may bring honour and glory will not be questioned, but it is by no means certain that they will provide us with the means of riotous living. In this connection a letter in last week's "Lancet" is of interest. A medical practitioner had written to complain that a prospective client of his had been skiagraphed by Messrs. Allen & Hanburys at a lower rate than he had quoted. The Plough Court firm explain that they had only carried out the instructions of a medical man who had employed them, and that on his representations as to the case they had charged a specially low fee. It need not be said that they clear themselves fully from any suggestion that they had endeavoured to trespass on medical practice. And they add "As a matter of fact we find the profits of radiography entirely insignificant, though we are aware that ridiculously groundless statements to the contrary have been confidently put forth." It may, of course, be that what would be an entirely insignificant profit to Messrs. Allen & Hanburys would be otherwise regarded by pharmacists who have not reached their position.

Hypermicroscopy

is to be the next scientific sensation. Unassisted vision is capable of distinguishing an object of a size between the one-twentieth and the one-tenth of a millimetre. Modern microscopes are estimated to have multiplied this faculty. That is to say they give the power to see similar fractions of a micron, which is the thousandth part of a millimetre, or the millionth of a metre. Microbes, for example, down to the size of the tenth of a micron, which is what the bacillus of pleuro-pneumonia in cattle is reckoned at, have been distinguished. This is the smallest microbe actually known. But pathologists entertain no doubt of the existence of still smaller ones. They believe that special microbes, as yet unseen, are associated with small-pox, with hydrophobia, and with the horse sickness of South Africa. So, too, in the investigation of the cell. Famous anatomists have postulated origins of the cell beyond the reach of any yet known microscopic power, such as the plastidules of Haeckel and the gemmules of De Vries. It is now asserted that a further advance into the regions of the infinitesimal has been made possible. Two German microscopists, Siedertopf and Zsigmondy, devised a method in 1903 which seems to be a development of the immersion process of the object in a block of glass cut in a peculiar way so as to admit of lateral lighting; and lately, according to an important article by M. Dastre, published in the "Revue de Deux Mondes" for March 1. the process alluded to has been remarkably simplified and improved by two young Frenchmen, A. Cotton and H. Mouton. M. Dastre states that their results are to be published shortly. He gives some indications of them, but it is not mentioned how far they have got. The diameter of a molecule is estimated at the ten-millionth of a millimetre. Will human eyes ever look upon one?

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Editorial Comments.

Export Business.

THE trade of the United Kingdom this year so far shows a figures a striking contrast to current comment and opinion. There is scarcely one man in a score who will admit, either frankly or otherwise, that business is good, yet when we turn to the Board of Trade statistics all

seems well. Thus, in February our exports were a million and a half better than in February 1904, and although the business days numbered twenty-four only, as compared with January's twenty-six, the total exports were greater—viz., 31,103,664*l.* for January, and 32,888,786*l.* for February, which is roughly $1\frac{1}{2}$ million per day for the former and $1\frac{1}{3}$ million per day for the latter month. Comparing last month with February 1904, we find the exports to have increased in the three chief sections, especially in manufactures, which were valued at 20,998,243*l.*, in contrast with 19,939,645*l.* last year. This does not include 7,619,723*l.* worth of colonial and foreign goods re-exported last month. This volume of business is bound to have an influence for the better upon internal economic conditions, which, it may again be noted, are not in the present depressed state solely on account of industrial competition with other countries, but largely owing to the extremely high taxation to which we are subjected. It must be noted, however, that the year's imports, so far, while stationary as to total, show declines in foods and raw materials, and an increase of over a million and a half in manufactured goods. Over two millions' worth less cotton has been imported, but it is cheaper; we have bought nearly four million cwt. for two million pounds less than we paid for $3\frac{1}{2}$ million cwt. last year. That means more work for Lancashire. The woollen industry, too, has been better supplied, for over 14 million pounds of wool, costing 7,331,554*l.*, has been imported this year, as compared with 11 $\frac{7}{10}$ millions (5,323,683*l.*) in 1904. The February imports of manufactured goods were a little less than in January, but half a million more than in February 1904. Metals and yarns and textile fabrics account for most of the increase. There was a fall of 3,153*l.* in imports of chemicals, drugs, dyes and colours. Returning to the exports, we show how they stand for February and the two months, a minus sign indicating decreases in value compared with 1904, and a plus sign the opposite. It will be remembered that February 1904 contained twenty-five working-days, a fact which alone accounts in some cases for this year's decrease:

	Feb.	Two months
	£	£
Aërated waters	7,647 -	19,712 +
Oils	11,552	30,949
Vinegar	3,807	7,498
Salt	26,427 -	63,503 -
Confectionery, etc.	57,991 +	121,635 +
Scientific apparatus	45,396 +	90,018 +
Bleaching materials	12,489 +	26,115 +
Coal products, not dyes	112,676 -	228,270 -
Copper sulphate	161,666 +	283,954 +
Cream of tartar	628 +	1,044 +
Dye stuffs	23,374 +	48,734 +
Glycerin	16,984 -	40,230 -
Chemical manure	327,922 +	584,454 +
Quinine	1,609 -	5,041 -
Drugs and medicinal preparations	110,632 +	224,878 +
Ammonia muriate	5,722 +	18,435 +
Painters' colours	149,417 -	305,418 -
Soda compounds	116,685 +	242,987 +
Other chemicals	185,002 +	399,151 +
Brushes	12,155 +	23,606 +
Rubber goods	104,933 +	220,967 +

We need not go into details of the re-exports of colonial and foreign goods. The above figures are highly satisfactory, especially in regard to chemicals, etc., which, so far, are better than in 1903, which was better than 1904, the totals for the two months of these three years being:

1903	1904	1905
£	£	£
2,320,579	2,283,276	2,409,720

Elsewhere in this issue we deal with current opinion on export trade, and we are pleased to note that it is not nearly so pessimistic as it was a year ago. British export

merchant-shippers are peculiar in the world's commerce in representing the top note of business. Our Colonies and India do outward and inward business to the value of about 450 million pounds sterling a year, and nearly three-fourths of this is with the old country. At present our exports to other parts of the Empire are not quite half of what we buy from them, and parity is not desirable, but it is for the nation as a whole to see to it that this magnificent sum of business is increased. We have the belief that it will if the different classes of trade are not interfered with by Government theorists. The history of British commerce eminently demonstrates the ability of our manufacturers and merchants to adapt themselves to changed conditions, and to meet competition, and we regard the current trade returns as evidence that this old leaven is again working.

A Drop in Bismuth.

The most interesting commercial event of the week has been a reduction of 1*s.* per lb. in the price of bismuth metal on the part of the Bolivian mine-owners. This was announced on Tuesday morning, and the makers of bismuth-preparations have accordingly reduced the price of carbonate by 9*d.*, subnitrate by 8*d.*, citrate by 4*d.*, and salicylate by 8*d.* per lb. As is usual with this article, no hint was forthcoming of the decline, so that no opportunity was offered either for delaying purchases or endeavouring to unload. We understand that the decline has caused great disappointment to makers and dealers alike, as for some time past there had been an excellent demand for all the preparations and the tendency of prices was decidedly firm, if not upwards. Consequently makers of salts have been somewhat free in their purchases of the metal. No falling clause is allowed on contracts of either metal or salts, and this has added to the irksomeness of the situation for those who have recently purchased. It will be remembered that in December last the metal was advanced by 2*s.* 6*d.* per lb., making the price 10*s.* This enabled those second-hand dealers who had, say, 10-cwt. lots of salts or more in stock to calculate their profits on paper, but this week's sudden reduction makes the prospective profits substantially less. The certainty of the demand and the apparent firmness of the market somewhat misled both makers and dealers. One explanation of the decline is that a large contract which was placed some time ago on behalf of Japan has expired, and the demand from that quarter has now fallen off. The Japanese Government has been a large buyer since the war, and cables over orders as required, but the bulk of them have been filled in Germany. This, therefore, does not explain the position. A more likely explanation is that bismuth ore has been found in Mexico, and the importation of small parcels from that country constitutes a menace to the Bolivian syndicate, as the stuff is sold below syndicate prices, thus enabling certain makers of salts to "cut" below the official prices, especially on the Continent. We do not see how it is possible to control these outside parcels of ore, as mine-owners and gold-prospectors are frequently making new discoveries of bismuth in conjunction with other ores. Indeed, as time goes on, it may be found that bismuth is more widely distributed than has up to the present been believed, and the recurrence of such experiences as that of this week may be reckoned upon.

The Poisons of 1903.

A CONSIDERATION of the Registrar-General's Report for 1903 leaves the impression that marriages, births, and deaths in

England and Wales are on the decline. It is reasonable to expect that the decline of marriage would have a deleterious

	Negligence and Accidents		Suicides	
	Males	Females	Males	Females
Acetic acid	—	—	—	—
"Alcoholic spirits"	2	4	—	—
Ammonia... ..	4	6	3	3
Anæsthetics—				
A.C.E. mixture	—	1	—	—
Chloroform	65	32	—	—
Chloroform and ether	—	1	—	—
Ether	7	2	—	—
Nitrous oxide	4	1	—	—
Kind not stated	18	15	—	—
Arsenic	3	—	3	1
Arsenical beer	—	1	—	—
Belladonna	3	1	—	3
Belladonna and aconite	—	1	2	—
Bichromate of potash... ..	—	—	4	—
Camphorated oil	—	1	—	—
Carbolic acid	9	11	63	78
Carbon dioxide	4	—	1	—
Carbon monoxide	7	1	1	—
Castor-oil seeds... ..	1	—	—	—
Caustic potash	1	—	—	—
Chloral	5	—	1	—
Chlorate of potassium	2	—	—	—
Chlorodyne	7	3	7	1
Chloroform (not for operation)	—	1	3	—
Chloroform and aconite	—	—	1	—
Clove oil	—	1	—	—
Coal-gas	10	6	9	1
Cocaine	—	1	—	—
Cocaine and ether	1	—	—	—
Copper sulphate	—	—	1	—
Corrosive sublimate	1	1	2	—
Creosote	1	—	—	—
Cresolene	—	1	—	—
Cyanide of potassium... ..	2	—	15	3
Disinfectant	—	1	1	—
Fumes, charcoal	—	—	2	—
Fumes, gas (kind not stated)	6	2	—	—
Fumes, kiln	8	—	—	—
Fumes, nitric acid	1	—	—	—
Hellebore powder	1	—	—	—
Hydrochloric acid	4	6	25	20
Hydrofluoric acid	—	—	1	—
Lead	5	2	—	—
Lead acetate	—	1	—	—
Liniment	—	1	1	2
Mercuric oxide	—	—	—	1
Mercury	—	2	2	—
Narcotic (kind not stated)	2	3	—	2
Nicotine	—	—	—	1
Nitric acid	1	—	5	4
Opium, laudanum, morphia	53	31	36	15
"Overdose of medicine"	1	2	—	—
Oxalic acid	4	3	40	49
Paraffin	1	—	—	1
Phosphorus	3	5	4	7
Poisonous berries	1	1	—	—
Prussic acid, oil of almonds	—	—	22	4
Salicylate of soda	1	—	—	—
Sheep-wash	—	—	1	—
Silver nitrate	—	—	—	1
Smoke	3	2	—	—
Soothing syrup	1	—	—	—
Strychnine, nux vomica	3	1	5	5
Sulpholine	1	—	—	—
Sulphuric acid	3	2	5	1
Tannic acid	1	—	—	—
Tobacco	1	—	—	—
Turpentine	1	—	—	—
Vermin-killer	—	1	4	4
Weed-killer	2	—	1	—
Wood sorrel	—	1	—	1
Yew berries	1	—	—	—
Yew leaves	1	—	—	—
Zinc chloride	1	—	—	—
Zinc sulphate	—	—	1	—
Kind not stated... ..	18	9	28	21

effect on the birth-rate, but whether that decline may also be responsible for fewer deaths is a question pregnant with argument. The death-rate for 1903 was 15.4 per 1,000 persons living—the lowest rate hitherto recorded. The elaborate tabulation and carefully prepared statistics given in the Report, with the deductions to be drawn from them, make the Blue-book an interesting document; but we are chiefly concerned with deaths from the professional point of view. We find that opium and the morphine-habit caused the death of 3 males in London and 9 males and 7 females in registration counties. In London 15 males and 1 female died from industrial poisoning (lead), and in registration counties 88 males and 2 females died from the same cause; while 3 males were poisoned with arsenic and other metals used in industry. The accidental or negligent "violent deaths" were 15,464 in number; 290 males and 168 females of that total succumbing to poisons or poisonous vapours. Suicide was committed by 2,640 males and by 871 females; 300 males and 229 females choosing "poisons and poisonous vapours" as their mode of destroying life. Particulars of the poisons, etc., that caused these deaths are tabulated opposite.

The position of carbolic acid—the once favourite poison—is peculiar. A comparison shows that while the scheduling restrictions of 1901 were instrumental in decreasing the number of accidents by 2 on that of 1902, there was one more suicide with carbolic acid in 1903, and the net gain on the year was therefore apparently only one life. The unscheduled mineral acids are still responsible for a large number of fatal accidents as well as suicides, and the narcotics (opium, laudanum, etc.) show an increase of 9 on the previous year's figures.

Papain Investigations.

Professor S. H. Vines, of Oxford, has reverted in the "Annals of Botany" to the investigations he made on papain some time ago. The occasion is a paper by Emmerling, who found that papain digested fibrin most actively in a slightly alkaline liquid, and that although the amount of amido-acids, etc., produced was relatively small, its action was specifically tryptic. Professor Vines has in consequence repeated some of his experiments, using Emmerling's method, the purpose being to institute comparative experiments with papains derived from several sources, with acid and alkaline liquids and with toluol and hydrocyanic acid as antiseptics. The quantity of fibrin used was small. Christy's, Finkler's, and Merck's papain were used, and the action was found not to be uniform. Christy's being the most active. The action was slower in the presence of toluol than with hydrocyanic acid, whilst in the presence of hydrocyanic acid the action was on the whole more rapid in the alkaline than in the acid liquid; and in the presence of toluol it was more rapid in the acid than in the alkaline liquid. These results show why Emmerling found the process of digestion to be so slow in his experiments. It was slow because he used Merck's papain and in a relatively small quantity, because he used toluol as the antiseptic, and because the reaction of the digesting liquid was alkaline. Merck's papain, active enough under other circumstances, is inert in an alkaline liquid containing toluol. Professor Vines then investigated the other point noted by Emmerling—the smallness of the amount of amido-acids, etc., formed in his digestion experiments. The explanation is that probably the sample of papain used did not actively peptolyse in alkaline liquid containing toluol and that the quantity of papain used by him was too small in proportion to the fibrin. The experimental data are set forth in the paper, Professor

Vines' conclusion being that the last word as to the properties of papain will not have been pronounced until a series of careful observations have been made with perfectly fresh material so as to avoid all those modifications that must necessarily accompany the preparations of the varieties of dried papain hitherto used in experiments. The subject, it is suggested, might well engage the attention of one of the botanical laboratories in the tropics.

Lead Tests.

The presence of lead in various pharmacopoeial chemicals has often been noted, but it has remained for Mr. C. A. Hill (Davy Hill & Co.) to systematically examine all the chemicals of the Pharmacopoeia as to the presence or absence of this impurity. The result of the work thus undertaken is given in an exhaustive paper beginning on p. 388 of this issue, and it will be observed that Mr. Hill has done for lead what Professor Dunstan and Mr. Robinson did for arsenic on behalf of the Pharmacopoeia Committee of the General Medical Council. The evident care with which Mr. Hill has conducted numberless estimations cannot but inspire confidence in his conclusions. It will be noted also that whilst the literature on the subject has been well sifted, Mr. Hill has avoided harping on the inaccuracies that he has come across in the course of his investigations—a spirit which will be generally appreciated. The contribution may be regarded as one to Pharmacopoeia revision, although the research was initiated solely for the purpose of more effective control of the chemicals handled in Mr. Hill's business.

Fairchild Scholarship and Prizes.

Mr. A. E. Holden, Bath House, Holborn Viaduct, London, E.C., Secretary to the Committee of Trustees of this educational scheme, informs us that the application forms for the July, 1905, Examination are now ready, and he will send copies, on request, to any intending candidates or their employers. The application form is accompanied by a full statement of the conditions upon which the scholarship and prizes will be awarded. The subjects of the examination are—(1) Elementary chemistry, (2) elementary materia medica, (3) elementary pharmacy and prescription-reading, and (4) elementary business knowledge. The examination is to be held simultaneously in Cardiff, Dublin, Edinburgh, London, and Manchester, early in July, but applications should be sent to Mr. Holden not later than June 1. The scholarship will be 50*l.* in money, and each of the four prizes a 5*l.* note. The unique conditions of this scheme, whereby apprentices and assistants of each country in the United Kingdom may compete on equal terms, has created much interest, and it promises good results in stimulating pre-collegiate study amongst the young men in the craft, a habit which goes a long way towards securing the highest qualification in pharmacy.

Medical Government.

Some interesting items in medical government came before the Executive Committee of the General Medical Council at the recent meeting. The Council have been in communication with the Chairman of the Departmental Committee of the Board of Trade on the operation of the Companies Acts. The Executive Committee had before them a further communication from the British Medical Association regarding the signing of certificates of illness for educational bodies by chemists. The B.M.A. are not satisfied with the rather pointed reply they previously received from the G.M.C. Attention is called to the fact that the certificate was not written on a chemist's memorandum form, but on a printed form issued by the local education authority and headed: "Form of Medical Certificate." The reply alluded to above concluded with the Council's opinion in the following words:

"If a public body is not required by statute to receive certificates signed only by medical practitioners it can accept certificates, if it chooses, from chemists or unregistered persons." We quote this to emphasise the exact position of chemists in this matter. The Pharmacopoeia accounts are interesting. The balance surplus to the end of 1904 was 853*l.* 2*s.* 5*d.*, this being exclusive of stock of Pharmacopoeias, valued at 474*l.* 12*s.* 1*d.* The expenditure on this account includes grants of 50*l.* each to Dr. Tirard and Professor Dunstan. Over 450 copies of the Pharmacopoeia were sold last year, but the interest in the arsenic report, as represented by fifty copies sold, does not appear to be great.

Hospital Economics.

A useful, because practical, paper was read before the Hospitals Association at Charing Cross Hospital on March 3 by Dr. Donald J. Mackintosh, medical superintendent of the Glasgow Western Infirmary. Dr. Mackintosh has been for twenty years concerned in the administration of hospitals and his paper on "The Control of Hospital Expenditure with Efficiency" was the epitome of his experiences during that period. Starting on the assumption that it is a matter of public importance to account for the difference in the cost per bed in hospitals with medical schools like that of Dundee costing 50*l.* 5*s.* and St. George's Hospital, London, costing 142*l.* 15*s.*, he laid down the requisite conditions for the control of expenditure in each separate department. He contrasted the conditions in the dispensing departments of Scotch hospitals and those of London. In Scotland, he pointed out, most of the important galenicals are purchased from wholesalers, while in several of the large London hospitals these are manufactured. He questioned the economy of the latter method. Pharmacy has become so many-sided, there are so many first-class wholesale manufacturing firms keeping their own staffs of experts that it is doubtful whether any hospital can compete with them. He thought it scarcely reasonable to imagine that, under modern conditions, it can pay an hospital to provide the labour, the space, the plant, the motive-power, and the experts required to compete to advantage with the great manufacturers. He did not advocate that everything in the dispensary should be bought from outside. Ointments, syrups, compound powders, suppositories, and many liniments might be easily and more economically made, but he emphasised the fact that the first duty of the dispenser is to dispense, and, in his opinion, it is improbable that the cost of machinery, salaries of laboratory experts, and so forth, does not exceed the cost of purchase of the more important galenicals. This is a debatable subject, and much diversity of opinion is likely to accrue if the matter is properly discussed. Dr. Mackintosh's method of checking by daily, in place of weekly, returns the expenditure in each department is well demonstrated in the way he deals with surgical dressings. Economy in purchase, he points out, is only one aspect of the problem. Economy in use is of even greater importance, and his strong argument is that the administrator (preferably a medical man) must be present at the hospital and have all these details under his close personal supervision.

THE STANFORD POISONING-CASE.—According to a Reuter's telegram, the police at San Francisco have received a despatch from the High Sheriff at Honolulu stating that the contents of the bottle of sodium bicarbonate belonging to the late Mrs. Stanford, from which she took a dose on the night of her death, on being analysed was found to contain 43 drams, of which 662 grains were strychnine.

Lead in Pharmacopœial Chemicals.

Its Occurrence and Estimation.

By CHARLES ALEXANDER HILL, B.Sc. (Lond.), F.I.C.

THE frequent presence of lead in pharmacopœial chemicals, arising from the general use of lead as a material in chemical plant, has naturally attracted, from time to time, a considerable amount of attention. The liability of medicinal chemicals to contamination with lead demands attention from public analysts, medical men, and pharmacists alike, on the common ground of the public health, but it has an additional interest for the last named, when regard is had to the incidence of the Acts relating to the sale of food and drugs.

The British Pharmacopœia has wisely included lead among the impurities to be tested for in the case of a large number of chemicals, but in several instances the requirement that the substance "shall yield no characteristic reaction for lead" has had to be ignored, whilst the absence of any mention of lead in the case of magnesium compounds is, on the other hand, a somewhat remarkable omission. Since careful examination will reveal the presence of lead in a large number of cases, it becomes necessary to determine accurately the amount present, and this is not in general the simplest of operations.

In view of these considerations it seems desirable that the chief results arrived at from a somewhat extended examination, both of the chemicals in use and of the analytical methods involved, should be recorded. It is believed that in all cases samples of the purest chemicals obtainable on a commercial scale at the present time have been examined, but it should be stated that no effort has been made to obtain and examine samples representing the other extreme; so that the fact of a notable trace of lead not being recorded in any particular case must not be taken as implying the absence of necessity for vigilance in the case of such a chemical.

GENERAL METHOD OF ESTIMATION.

The quantity present being in nearly all cases too small for gravimetric determination, recourse must needs be had to a colorimetric method of estimation; and here it may be stated once and for all, that whilst it is comparatively easy to obtain, in each case, a method capable of yielding results which are strictly comparative, the important thing to ensure is that one's results are not only strictly comparative, but are also absolute.

The general *modus operandi* in conducting a colorimetric test for lead may be assumed to be fairly well known; suffice it to say that the lead is precipitated as sulphide from a solution of a known amount of the substance, and the depth of colour produced is matched in a dummy* solution of pure substance, to which so much lead has been added as will give, upon the addition of sulphide, an equal and similar coloration. When, in performing the test, it happens that the dummy solution gives a colour which is too light, a fresh one must be prepared; more lead must never be added to the solution when it contains the sulphide, since by doing so a grave error is introduced.

It is a matter of primary importance to recognise the fact that a given quantity of lead, when precipitated as sulphide in a salt solution, does not give the same depth of colour as it does if precipitated in plain water, the difference being most marked with the salts of organic acids. In the case of inorganic salts, as, for example, ammonium chloride, the difference is very slight, so that here an approximation sufficiently good for some purposes is obtained by matching the colour in a dummy of plain water. The most accurate results, however, even in these cases, are obtained by employing dummy solutions of pure substances.

An apparently trivial difference in the conditions may sometimes mean a considerable difference either in the tint or in the depth of the resultant colour, and this con-

sideration has a value quite apart from such questions as the solubility of lead sulphide in ammonium tartrate and the like.

An alternative method, obviating the necessity for lead-free materials, has been found to be available, however, in a great many cases. This depends on the fact that the colour given by a definite quantity of lead sulphide in a solution of any given salt is sensibly the same for different concentrations of the salt, provided that the concentration vary between certain limits. For instance, 5 c.c. of the standard lead solution added to a solution of pure lead-free ammonium tartrate made alkaline with ammonia will give, upon the addition of sulphide, the same depth of colour whether the tartrate solution be 4 per cent. or 24 per cent. The like holds good for all salts, both of organic and inorganic acids, which have been tried, and will be again referred to in the section headed "citrates and tartrates"; it will be sufficient here to point out that the number of c.c. of the lead solution which it is found necessary to add to a solution of 2 grams of the substance in order to obtain the same depth of colour as is given by 12 grams, represents truly and accurately the amount of lead in 10 grams of the substance.

Due account must be taken of the effect of other heavy metals, and since one of these—iron—is usually found, the mode of procedure is to make the solution alkaline with ammonia, and treat it with a little potassium cyanide. This method, which is due to Dr. F. L. Teed,* prevents the ultimate precipitation of both iron and copper, by converting them into so-called "double" cyanides, so that the solution contains no free ions of these metals. In the presence of more than the slightest trace of iron it is necessary to heat the solution after adding the cyanide, care being taken that free ammonia is present at the end of the operation.

Finally, the lead is precipitated by the addition of a few drops of solution of alkaline sulphide; ammonium sulphide was formerly used, but sodium sulphide has certain advantages, as has been pointed out by Mr. C. T. Bennett.† This procedure I find to be preferable in all cases to working in acid solution, for the error due to the solubility of lead sulphide in acids is thus avoided; moreover, the colour produced by the lead sulphide in alkaline solution is a clear brown tint, and this is more easily and accurately matched than the less intense dull gray which results in acid solution.

There is in each case a certain depth of colour, corresponding to a definite amount of lead, at which point the test is most delicate—i.e. at this point a differentiation between two solutions containing nearly equal quantities of lead is most surely and easily made. As a rule, it is best to use so much of the substance that about 5 c.c. of the lead solution are required.

The latter, a solution of lead nitrate of such strength that 1 c.c.=0.00001 gram Pb, should be made as required, and not kept for any length of time. It is conveniently made from a solution 100 times as strong; the latter will remain constant provided it be kept distinctly acid.

The potassium-cyanide solution (10 per cent.), when freshly prepared, will generally be found to give a slight coloration with the lead solution; this difficulty disappears on letting the solution stand, or it may be immediately removed by the addition of hydrogen peroxide, 1 c.c. or so of the "20-volume" solution usually sufficing for 200 c.c. of the cyanide solution.

The form of the Nessler glasses used is not unimportant, since some of those sold do not exhibit small differences of tint. They should be made thin, especially at the base, and of the purest white glass. Those used in these experiments have an internal diameter of about 2.5 c.m., so that the 50 c.c. column of liquid is 10 c.m. high. In practice it is

* It is convenient to have a name for the solution which is made up for the purpose of matching the colour given by the solution of the substance. It will be referred to here as the "dummy" solution.

* *Analyst*, Vol. 17, p. 142, August, 1902.

† This journal, Vol. 64, p. 633.

best to raise the glasses, at the same time inclining them slightly towards the observer, so that the light is reflected at the porcelain slab beneath, and reaches the eye after traversing the whole length of the column of solution. In this way the greatest delicacy is attained. Dr. Teed has recommended porcelain dishes as being preferable, but these are perhaps better adapted for detecting a very slight darkening of colour than for quantitative experiments.

One point of some difficulty which is common to a large number of cases is the fact that the solution of the substance, when prepared and made ready for the addition of the sulphide, is by no means colourless, but is usually yellow or yellowish brown. In proportion to the depth of this inherent colour of the solution, the delicacy and accuracy of the test must diminish; in fact, where it is very considerable I am of opinion that results are only to be relied upon within somewhat wide limits. This inherent colour—sometimes so small as to be negligible, sometimes requiring serious attention—is not by any means always entirely due to iron, and experiment has shown that matching it by adding iron to the dummy solution leads to very erroneous results indeed. The presence of a considerable trace of iron does, however, cause the solution, after treatment with cyanide, to assume a yellow tint, and this tint I find does not disappear on warming, as has been stated by other writers. The possible effect of iron on the test may be easily seen by taking two Nessler glasses each containing 0.00005 gram of lead in 50 c.c. of water, and adding to one of them 0.00005 gram of iron; on adding sulphide to each, after treatment with ammonia and cyanide in the usual way, it is seen that the colour of the solution which contains only lead is much darker than that of the one which also contains iron, the yellow having masked to some extent the gray of the lead sulphide.

If this experiment be repeated, using instead of plain water a solution of ammonium chloride, the same effect is observed, but to a less extent, whilst with ammonium tartrate it is scarcely noticeable.

The logical conclusion is that when the substance contains a heavy trace of iron, the presence of this should be considered even after treatment with potassium cyanide. This being done, however, there may still remain the inherent colour of the solution (which, indeed, may occur in the total absence of iron), and in order to render the conditions completely parallel, should be matched in the dummy before making the test, and matched in such a way as not to vitiate the result. In this connection I feel it desirable to emphasise the fact that the use of any reagent for this purpose is to be made with the greatest caution, and is only permissible when it has been proved by actual experiment with pure substances that the reagent in question does not vitiate the test, as otherwise serious errors may be introduced.

Attention should be given to the glass vessels used. It is well to refer to this somewhat obvious point because much glass which is unobjectionable as far as cold solutions are concerned will yield lead to boiling solutions of acids or alkalis. It is advisable to test one's glass vessels with boiling nitric acid or caustic alkali before using them for these colorimetric experiments.

In considering now the proportion of lead which is present in good commercial samples, those chemicals, for the most part, will be dealt with which are not conveniently made on the small scale, and which serve in many cases as starting-points in the manufacture of others.

MINERAL ACIDS.

Phosphoric acid (sp. gr. 1.75) has been found to contain from 1 to 14 parts of lead per million, 10 parts being a usual figure. In hydrochloric acid ("pure") the amount found has been only from 1 to 6 parts, but in nitric acid ("pure") from 1 to 75 parts per million. Sulphuric acid ("pure") usually contains less than 15 parts per million, but occasionally much more is found.

ACETATES.

Instead of the usual 1 drop or few drops of sodium sulphide solution, 1 c.c. should be added in testing acetates; for unless a large excess of sulphide be present the colour fades rather quickly; ammonium-acetate solution, indeed, has been found to dissolve lead sulphide rather freely on standing.

Acetic acid (glacial) is, as a rule, free from lead, the amount found having varied from none to 3 parts per million. Potassium acetate has been found to contain only a few units of lead per million, but in sodium acetate heavy traces may occur if it be neglected to remove this in the purification of the commercial article. It is unnecessary to refer to the official solution of ammonium acetate since the substances from which this is prepared are dealt with individually.

AMMONIA AND SALTS.

Commercial solution of ammonia is, as a rule, practically free from lead, from none to 2 parts per million only being present. This is not the case, however, with ammonium salts, five of which are official. Of the three which are required to give no reaction for lead, the chloride, in the purified state, usually contains from 2 to 6 parts per million, whilst in the commercial article up to 20 parts per million has been found. The bromide has been found to contain from 2 to 10 parts per million. The phosphate does not call for comment.

Of the two salts not directed to be tested for lead, the benzoate, as would be expected, contains only negligible traces; in the carbonate, on the other hand, notable quantities are frequently found, as has been pointed out by Mr. C. T. Bennett.* The "lump" usually contains only small traces, 1 to 4 parts per million being the normal quantity, whilst 20 parts per million is the largest amount found. The "powder," on the other hand, frequently contains as much as 25 to 50 parts per million, and as much as 120 parts per million was found in one sample.

BORIC ACID AND BORAX.

The British Pharmacopœia directs that these substances shall yield no reaction for lead. Twelve parts per million is the largest extent to which I have found lead in borax, and the great majority of samples have contained only 1 or 2 parts per million, so that here it may be said, without great error, that the B.P. requirement has been met. Boric acid, on the other hand, frequently contains as much as 20 or even 30 parts per million, and as much as 50 parts per million has been found. I have examined samples containing as little as 2 parts per million (crystal) and 4 parts per million (powder), but, judging from the analyses of a large number of samples of both substances, it must be said that boric acid contains heavier traces of lead than does borax.

CITRATES AND TARTRATES.

The presence of lead in tartaric and citric acids has for many years received a considerable amount of attention. In 1893 appeared Warington's exhaustive paper† on the detection and estimation of lead in these acids, and in the following year Messrs. Budden and Hardy‡ published a paper dealing with the attendant difficulties and possible errors of the colorimetric process.

In Warington's paper it was shown that the best colorimetric method of estimation is to work in alkaline solution, using Teed's method (already mentioned) of keeping iron and copper in solution. Here, too, great stress was laid on the necessity of making strictly comparative the conditions, both in acid and alkaline solution, under which the depths of tint are observed.

In this connection I cannot do better than quote from the paper the following paragraph, which refers, of course, to the test in alkaline solution:

The depth of tint produced, for the same quantity of lead present, is far greater in an ammoniacal tartrate or citrate solution than in the same volume of water; it is quite essential, therefore, if equality of tint is to be interpreted as equality of lead, that all comparisons should be between two citrate or tartrate solutions, and not between one of these and water.

I incline to think that Warington's important work has possibly been to some extent overlooked or forgotten by later writers, and in this connection it may be remarked that, seeing how deficient were the directions of the B.P., 1885, in regard to the tests for lead in citric and tartaric acids, it is the more surprising that the 1898 edition, appearing five

* This journal, January 30, 1904, p. 203.

† J.S.C.I., Vol. 12, p. 97; February 28, 1893.

‡ Analyst, Vol. 19, p. 169; August, 1894.

years after the publication of Warington's paper, should contain tests which have given rise to so much dissatisfaction.

The two methods which have hitherto been chiefly used for colorimetrically estimating lead in citrates and tartrates are Warington's process and the ignition process. In the latter the substance is ignited in a porcelain crucible, and the lead dissolved out from the ash. In the former, as is well known, the substance is operated on direct. This is by far the more expeditious method of the two, but it involves the somewhat troublesome operation of preparing and keeping lead-free citric and tartaric acids.

The best commercial samples of citrates and tartrates yield solutions which, when made alkaline with ammonia and warmed with cyanide, are nearly colourless, so that in these cases the lead can be determined with great accuracy. The solution given by cream of tartar is usually more coloured than that of citric or tartaric acid, so that the accuracy of the test is here correspondingly less.

To eliminate the error due to this inherent colour, which is sometimes considerable, sometimes negligible, but which is never entirely absent, and so render the test as accurate as possible, the dummy solution may be brought to the same tint by adding to it, drop by drop, a very dilute aqueous solution of "saccharum ustum" (caramel). The permissibility of this procedure has been established by a large number of experiments, and its reliability proved by repeated trial.

Notwithstanding the fact that attempting to estimate lead in citrates and tartrates by comparing the colour given by one of these with a "dummy" of plain water leads to fallacious results, yet in very many cases it is possible to do without the lead-free substances and still retain the quickness and accuracy of Warington's process, as the following considerations, to which reference in a general sense has already been made, will show.

It has been found that although the colour given by, say, 0.00005 gram of lead in a 50 c.c. solution of 10 or 12 grams of tartaric acid, made alkaline with ammonia and treated in the usual manner with cyanide and sulphide, is totally different from that given by the same quantity of lead in plain water, yet it is very nearly the same as that given in a similar solution containing only 1 gram of tartaric acid, and in a solution containing 2 grams the difference practically disappears and is quite negligible.

The same is true of citric acid.

Here, then, is a ready means of accurately determining the lead in any fairly good sample—i.e. one containing less than 10 parts per million of lead. For, taking 7 or 12 grams of the substance for the estimation, it is only necessary to dissolve 2 grams of the same substance in the dummy solution and to proceed as usual. The amount of lead which it is found necessary to add to the dummy in order to produce equality of colour upon the addition of sulphide is, of course, the quantity present in 5 or 10 grams of the substance, as the case may be.

This method is not applicable, however, to substances containing much lead. Suppose, for example, that one has to deal with a tartaric acid containing 40 parts of lead per million; then no more than 2 grams should be taken for the estimation, this quantity being equivalent to 8 c.c. of the lead solution. In such cases pure ammonium tartrate must be used in the dummy.

The limitations of the Warington process in coloured solutions have already been referred to; indeed, if the substance contain only a few units per million of lead, and yield an ammoniacal solution which is much coloured, only approximate results are possible. It is in such a case as this that the ignition process is indicated. At first sight it may appear hopeless to try and ignite a large mass of material, containing only a fraction of a milligram of lead in all, without loss of lead. Still, the process has been advocated, and the loss of lead has always been assumed rather than proved to be inevitable, so that it seemed desirable to test, by a series of experiments, the validity of this method.

In the process of ignition the lead is reduced to the metallic state, and herein lies the chief danger of loss, for unless the ignition be conducted cautiously, there is produced locally a sufficiently high temperature to volatilise the lead.

Fresenius,* indeed, issues a specific warning on this very point, and it has been found that unless attention is paid to it notable amounts of lead are lost.

Somewhat low results are obtained, again, if the substance be ignited to a white ash; it is preferable, therefore, after charring the substance, to treat the residue with strong nitric and sulphuric acids, and then heat to a white ash. The lead sulphate is dissolved in solution of ammonium acetate, and determined colorimetrically as usual, ammonium acetate being, of course, employed in the dummy solution.

The incineration of citric and tartaric acids is found to proceed more satisfactorily, and concordant results are more readily obtained with an acid which yields a high ash. It is advisable, therefore, in igniting acids which are practically ash-free to create an "ash" artificially by adding a small quantity of calcium carbonate to the sample before igniting it. This addition, which has been previously recommended, also tends to prevent loss of the light ash by being mechanically carried away.

The results obtained show that in those cases in which the direct colorimetric process is either inaccurate or requires confirmation, the ignition process is available. It is, however, in my opinion in no way superior to another method which is both accurate and reliable. I refer to the electrolytic separation of the lead, which may be effected in the following manner:

A suitable quantity of the substance, 10 or 20 grams, is dissolved in water, the solution made alkaline with ammonia and diluted to about 80 c.c. To facilitate the electrolysis 0.1 gram of ammonium oxalate is added, and the solution heated to 75° C. during the operation. A platinum spiral and cylinder have been employed as anode and cathode respectively, and a current of about 0.6 amperes.

The lead is deposited on the cathode as metal, quantitatively, usually in about three hours. After cautiously washing the cathode, the lead is dissolved off with nitric acid and determined colorimetrically in the usual way, ammonium nitrate being, of course, added to the dummy solution.

The electrodes may be replaced in the solution and the current again passed for a period. If any additional lead is deposited, this is estimated and the quantity added to that at first obtained, a negative result, of course, showing that the deposition is complete.

This process I have found very satisfactory from all points of view, and for substances which yield coloured solutions, or as a control method, I consider it incomparably better than the ignition process.

The proportion of the lead present in the best tartaric acid of English manufacture does not as a rule exceed 5 parts, and rarely exceeds 10 parts per million; foreign acid, whilst sometimes containing only 5 parts per million, frequently contains very much more.

The best citric acid (English) has been found during the past twelve months to contain less than five parts per million. Quite recently I have examined an acid which can fairly be called "lead-free." For working with 10 grams no development of colour was discernible, and even with 20 grams it was doubtful if there was any change; certainly the colour was not equal to 1 c.c. of the standard lead solution, so that the lead, if present, was distinctly less than one part in two millions. It is interesting to note that the manufacturers of this product are doubtful as to whether it will be possible to consistently maintain quite so high a standard of purity.

Cream of tartar containing less than 5 parts per million of lead is now readily obtainable. But though it frequently contains only one or two parts per million, I have not yet met with a sample in which lead could not be found. Minute traces cannot be estimated in cream of tartar by the direct process with the same degree of accuracy as in tartaric acid, on account of the coloured state of the solution when made alkaline with ammonia.

Sodium potassium tartrate usually contains from 5 to 10 parts per million of lead.

Potassium citrate contains less than 5 parts per million of lead.

Some recent results obtained by the methods described above are tabulated below, and will serve to illustrate the

* "Quantitative Analysis," Vol. 1, p. 245.

possibilities and limitations of the processes. Duplicate determinations were made in all cases except in Sample 3. The solution given by Sample 5 was, when made alkaline with ammonia, yellowish, and that given by Sample 6 markedly so; hence only approximate results were possible by the direct methods in these cases.

		Parts of Pb. per Million found by:			
		Direct Processes		Processes Involving Separation of the Lead	
		Warington's Method	New Method	Ignition Method	Electrolytic Method
1	Tartaric acid (Engl'h)	4	4	4	4
2	" (Foreign)	10	10	9	9
3	" "	25	—	22	23
4	Citric acid "	20	20	18	18
5	Cream of tartar ...	1 or 2	1 or 2	2	2
6	" "	about 5	—	3.5	4
7	Rochelle salt ...	9	9	10.5	10

MAGNESIUM COMPOUNDS.

The British Pharmacopœia, in furnishing "Characters and tests" for these substances, takes no account of lead, yet both varieties of the oxide and the oxycarbonate contain notable traces of this impurity. Indeed, not long ago the traces present in the "heavy" varieties were sufficiently large, having regard to the comparatively large dose of these compounds and to the fact that they are frequently administered to children, to warrant the epithet "objectionable," but it is satisfactory to be able to state that the makers—having had the fact represented to them—have so far coped with the difficulty that the proportion present has been very materially reduced.

As regards the origin of lead in these substances, it is clear that where Dolomite is taken as a starting-point in the manufacture, there is the chance of lead coming in through the use of impure mineral acids, but where—as, I believe, is now more general—Kieserite is used, then the contamination must arise in the magnesia manufacture.

For the estimation, the oxide or oxycarbonate is dissolved in hydrochloric acid, ammonium chloride added in sufficient quantity to prevent precipitation of magnesium hydroxide on addition of ammonia, and the test conducted as usual, the dummy solution being made up of magnesium and ammonium chlorides.

Commercial "magnesia" and "magnesii carbonas" generally contain a small quantity of phosphate, which causes a slight precipitate when the ammonia is added. This precipitate may be filtered out without any loss of lead occurring.

Magnesia.—In "magnesia levis" the proportion of lead found has been from 10 to 30 parts per million, but in "magnesia ponderosa," on the other hand, one sample contained 300 parts per million (0.03 per cent.) Other samples have varied from 120 down to 30 parts per million. One sample examined contained only 5 parts per million, this, however, was heavily contaminated with arsenic.

Magnesii carbonas.—In the "light" variety I have found the lead to vary from 8 to 20 parts per million, with an average of 15 parts. One sample contained only 5 parts per million, but this was not a sample from bulk. The lowest proportion I have found in the "heavy" variety is 20 parts per million, whilst the majority of samples contain 30 to 35 parts. In one sample I found 200 parts (0.02 per cent.). In no sample of the "liquor magnesii carbonatis" has any notable trace of lead been found; the proportion present in four samples was about from 1 part in 5 millions to 1 part in 10 millions.

Magnesii sulphas.—The lead has been found to vary from 2 to 6 parts per million.

The lead was determined gravimetrically in one sample of "heavy" carbonate, which by the colorimetric method had been found to contain 0.015 per cent. Two hundred grams were dissolved in pure hydrochloric acid, and the solution made slightly alkaline with ammonia, boiled, and filtered.

By this means the iron and phosphoric acid are got rid of, but no lead is lost. The lead was then precipitated as sulphide, filtered off from the hot solution, and was weighed as sulphate in the usual way. The results of three determinations were as follows, 200 grams of the oxycarbonate being taken in each case:

	PbSO ₄ weighed	Found of Pb.
1.	0.0404 gram	0.0138 per cent.
2.	0.0474 "	0.0162 " "
3.	0.0420 "	0.0143 " "
Mean		0.0148 " "

SODIUM SALTS.

Of the fifteen official salts nine are directed to give no reaction for lead. Included in the remaining six, in respect of which no such requirement is made, are the chloride, phosphate, and salicylate. In these substances the presence of lead would seem to have more importance than in such salts as the arsenate and the nitrite, which are required to be free.

The proportion of lead found in the more important sodium salts, and in some other pharmacopœial chemicals not previously mentioned, are as follows:

	parts per million
Benzoic acid ...	3
Calcium carbonate ...	none to 6
Glycerin ...	none
Hydrobromic acid ...	2 to 5
Lactic acid ...	none
Lithium carbonate ...	4 to 10
Potassium bicarbonate ...	3 to 8
Potassium bromide ...	none to 2
Potassium carbonate ...	1 to 6
Potassium iodide ...	none
Potassium nitrate ...	none
Potassium tartrate ...	3 to 16
Saccharum lactis ...	none
Sodium bicarbonate ...	1 to 6
Sodium bromide ...	1 to 2
Sodium carbonate ...	3 to 15
Sodium chloride ...	1 to 6
Sodium iodide ...	1 to 4
Sodium sulphate ...	1 to 6

The reagents used in this work have been specially prepared for the purpose.

I desire to acknowledge my indebtedness to Mr. H. S. Collins for the assistance he has given me in this work; and also to Mr. T. T. Cocking, who has carried out much of the analytical work. To both of these gentlemen my thanks are due for their valuable assistance.

India and the East.

(News from our own Correspondents.)

RANGOON is to have a new General Hospital, the buildings and fittings being estimated to cost Rs. 21,51,707.

IMPORTANT SULPHUR-SPRINGS have been discovered near Thandaung, the sanatorium for Burmah. The medicinal properties of the springs are in great repute among the natives of the district.

OPIMUM FOR THE FAR EAST.—The P. & O. *Palermo*, which arrived at Colombo on February 7 last from Calcutta, put out 250 cases of opium for transhipment to Hong-Kong, Shanghai, and Batavia.

THE MYSORE FOREST DEPARTMENT has for sale 74 tons of sandalwood, the residue of the produce disposed of at its recent auctions. The classes of sandalwood are Government, Jaghir, and Inam wood.

MR. F. NOEL PATON, Secretary to the Chamber of Commerce, Bombay, has been appointed Director-General of Commercial Intelligence to the Government of India; and **MR. W. L. HARVEY**, Municipal Commissioner, Bombay, has been appointed Secretary to the Government of India in the new Department of Commerce and Industry.

THE OPIUM REVENUE.—The opium-industry in Central India had a very prosperous year in 1903-4, owing to the increased demand in China for old Malwa opium and the abnormally high prices realised at times in Bombay. The total number of chests exported in 1903-4 to China was 27,338, on which the duty realised amounted to Rs. 1,37,89,100, against 20,888 chests and Rs. 1,05,52,950 in 1902-3.

Winter Session.

Association Ballads.

THE PURPOSE.

*The men, their aims, their daily irk;
Their troubles, trials, thoughts, and views
On things politic, foes that lurk
In friendly guise, but treach'rous work—
These be the burden of our Muse.*

LX. PRESTON.

THE claim of Proud Preston to rank with the foemen,
Who fight for the Right with the scabbard and steel,
Is meekly admitted by Lancashire yeomen
Whose principles wilt not at threat or appeal.
At Warrington warbles the Young (ardent Rymmer),
Uplifting the song of the Needy Untaught,
Projecting his plan of a 'Prentice's primer,
And setting the faith of his Betters at naught.
But calmly Proud Preston with outspoken Arkle
Discusses protection of prices, until
The orbs of the grocer with anger be-sparkle,
While Hadfield prepares them a ponderous pill.
When Williams worries and takes them to task, you
Look round to find solace from competent Rae;
Or you bask in the beams eke of Sharples or Askew,
As you yearn for the light of the long-promised Day.
That Day, when the Bill, disarrayed and depleted;
That Bill, that with highest importance was fraught,
Shall pass through the Commons, unscathed, undefeated;
That day will the somnolent Weasel be caught.
No murmur Proud Preston allows to escape her,
She will not that Wigan should see her in pain,
So Gifford may grumble, and Robinson caper,
But Preston will ever the proudest remain.

Blackpool Chemists' Association.

MR. SANKEY presided at the meeting held at the Palatine Hotel, Blackpool, on Friday, March 3, when there were also present Messrs. Turver, Laurie, Boothroyd, Ashton, Greenwood, and Johnson (Secretary). Mr. Turver opened a discussion on the Pharmacy Bill and other members followed.

Wakefield Chemists' Association.

A MEETING was held on Tuesday evening, March 6, at the Victoria Temperance Hotel, Mr. T. C. Whaley presiding. It was decided to hold the annual dinner on Wednesday, April 5, instead of March 29, as originally intended. Each of the Associations comprising the West Riding Federation will be invited to send a delegate. Mr. J. H. Chaplin (Vice-President) was appointed to attend the dinner of the Huddersfield Association on March 22.

Stockport Chemists' Association.

THE monthly meeting was held at the Albert Hall, Stockport, on Wednesday, March 1, at 9 P.M. Mr. Dodge presided, and there were also present Messrs. Orrell, Royse, Gee, Dunlop, Riach, Wilson, Forbes, and Hick. It was agreed, on the motion of Mr. Wilson, that a letter of condolence be sent to Mrs. Davis, sister of the late Mr. W. B. Orton. It was also resolved to suggest the name of Mr. Hick as Divisional Secretary of the Pharmaceutical Society, in place of Mr. Orton. The Pharmacy Bill was approved, and, on the motion of Mr. Dunlop, seconded by Mr. Riach, the Secretary was instructed to draw up a form to be signed by chemists of Stockport and district, in support of the Bill, and to forward it to the borough members asking them to support the Bill at the second reading.

Irish Chemists' Assistants' and Apprentices' Association.

THE usual weekly meeting of this Association was held on March 3 at the Nelson Café, 33 Lower Sackville Street,

Dublin. The Entertainment Committee reported the satisfactory progress of arrangements for the smoking-concert to be held on March 24 in the Gresham Hotel. An informal discussion took place on the suggested conference of chemists and druggists and pharmacists in Dublin to place the charges for patent and proprietary articles on a more remunerative footing. The feeling of the Association was that there was nothing to prevent the immediate starting of an anti-cutting society. The hearty co-operation of the assistants was promised to the employers in any movement of the kind.

Newcastle-on-Tyne Chemists' Association.

A MEETING was held in the Hôtel Métropole, Newcastle, on Wednesday evening, March 8, the President (Mr. G. Foggan) in the chair. The following members were present: Messrs. Wright, Ridley, Kerse, Cubey, Gilderdale, Watson, Wootton, Dewar, Whitehead, Atkins, Parker, Pescod, Hill, Graham, Gray, Davidson, Dean, and Dacres. The President called upon Mr. T. C. Hughes to give a lecture on

PHOTO-MICROGRAPHY.

Mr. Hughes briefly described the apparatus necessary for photo-micrographic work and went into great detail in regard to the use of suitable colour-screen light-filters which are required for the treatment of stained sections. A very interesting series of lantern-slides was shown to illustrate the chief points of the lecture. A vote of thanks was accorded to Mr. Hughes and his assistant (Mr. Payne).

Mr. H. W. Noble was elected a member of the Association.

The Secretary was instructed to advise divisional secretaries in the district to write to members of Parliament re the Pharmacy Bill.

Burnley Chemists' Association.

A LECTURE was given at the Bull Hotel, Burnley, on Tuesday evening, March 7, by Mr. Thomas Maben, F.C.S. (Parke, Davis & Co.). The medical men of the district had been invited to join the chemists on this occasion, and about fifteen doctors attended in a company of about forty. Dr. A. M. Sinclair, President of the Burnley Medico-Ethical Association, was in the chair. Mr. Maben's lecture was on the preparation of serums and vaccines, and was illustrated by numerous limelight views.

Dr. Sinclair, in moving a vote of thanks to Mr. Maben, thanked the Chemists' Association for having invited the medical men to the meeting, and referred to the good relations subsisting between the local medical men and the chemists. He also spoke in high terms of the lecture, which he said was one of the best he had ever listened to.

Mr. Brown seconded, and said the chemists were delighted that the medical men had attended in such numbers. On the motion of Dr. Bird, seconded by Dr. Rodgers and supported by Mr. J. H. Carter (veterinary surgeon), the thanks of the medical men were tendered to the Chemists' Association for their invitation, and later the Chairman was thanked, at the call of Mr. J. A. Barlow, seconded by Mr. Fletcher. The evening was greatly enjoyed by all present.

Aberdeen Pharmaceutical Association.

THE sixty-seventh annual meeting of this Association was held in Robert Gordon's College on Wednesday evening, March 1. The Secretary's report was a bit doleful, and concluded with the hope that a successful series of meetings will be held next session. The Treasurer's report showed income of 19*l.* 17*s.* 6*d.* from fifty-three subscriptions and 2*l.* 5*s.* 11*d.* interest from bank. The payments were: Subscriptions to Federation, 1*l.* 1*s.*; payment to Robert Gordon's College, 9*l.* 3*s.*; printing, 3*l.* 16*s.* 1*d.*; and postages, etc., 2*l.* 16*s.* 5*d.* The Education Committee reported that the competition for the Association's scholarships took place in May, when two candidates presented themselves, and the successful candidate was Peter Fyfe, who served his apprenticeship with Mr. Charles Simpson.

The reports were adopted.

The Executive Committee reported that they had had

under consideration the Weights and Measures (Metric System) Bill, and recommended that the Association should support it.

The following were elected as office-bearers for 1905-6: President, Mr. A. L. Bruce; Vice-President, Mr. James Spence; Secretary, Mr. John Black (295 Rosemount Place); Treasurer, Mr. James Paterson; and Auditor, Mr. William Giles.

Halifax Chemists' Association.

A MEETING was held on Tuesday evening, March 7, at the Old Cock Hotel, when the attendance was somewhat meagre. Mr. W. R. Black made certain proposals which should greatly improve the meetings next session. Mr. Clement Fielding (President) read a short paper on

SPIRITUS ÆTHERIS NITROSI.

He had obtained samples guaranteed B.P. by the wholesalers and tested them immediately after delivery. They yielded respectively from 5 c.c., 28.8, 7.0, 21.6, 33.3, 15.3, 34.0, 33.6, and 35.0 vols. of NO. The most deficient sample had not been obtained from a pharmacist. Mr. Fielding had also obtained eight samples of

POTASSIUM IODIDE.

Seven of these contained appreciable quantities of iodate as impurity. He called the attention of the meeting to the serious consequences of this impurity, as when testing spt. æther. nit. it gives a greater percentage of ethyl nitrite than is in reality the case. [We reproduce this remark in our reporter's notes with hesitation. If the iodine liberated were taken as the measure of the ethyl nitrite it would be true, but iodate does not increase or diminish the volume of NO liberated.—EDITOR.]

OTHER BUSINESS.

It was agreed, on the motion of Mr. Fielding, to nominate a candidate for the Pharmaceutical Council, because it is in want of a member who will support retail interests. He added that on the Council are members who, directly or indirectly, are representatives of title-stealing companies, who represent wholesale drug interests, or who cover the present system of dispensing-doctors, but the majority of the electorate are brow-beaten, toiling dispensing chemists and drug-retailers, and the majority of the Council should be men of this kind. Mr. H. Hebden will bring the matter before the W.R. Federation.

Mr. H. Hartley and Mr. A. L. Stevenson, both of Todmorden, were elected members of the Association.

Mr. H. Hebden was chosen to represent the Association at the Huddersfield Association's dinner on March 22.

Preston Chemists' Association.

THE members met at the Moor Park Pharmacy on Wednesday evening, March 8, and discussed

THE PHARMACY BILL.

The Hon. Secretary (Mr. Williamson) introduced the subject in an able review of the question of company-pharmacy and the danger to the public from the partial freedom of companies from the regulations of the Pharmacy Act. Mr. Arkle followed, and it was agreed to communicate with the members of Parliament for the borough, asking them to support the Bill.

CHEMISTS' WINE-LICENCES.

Mr. Arkle drew attention to the remarks of the Chairman of the Preston Licensing Committee recently with regard to the holders of chemists' wine-licences in the town, and said he wrote to Mr. W. P. Park stating that his observations were liable to misconstruction. The Chairman thanked him for his letter, and promised that at the adjourned sessions his remarks should not be open to the same complaint. Some members of the licensing authority, said Mr. Arkle, seemed to think that the methylated-spirit licence covered all that was necessary. In his own opinion, a chemist lowered himself by dealing in intoxicating liquors.

Mr. Williamson said some medical men persisted in ordering so-called medicated wines and in sending their patients to the chemist's for them.

AMERICAN SYNDICATES.

Mr. Arkle called attention to the growing practice of American syndicates in forcing their articles on chemists. They did not give anything like an adequate profit, while some of them stipulated that the chemist must hand over the things without any suggestion about any other preparation. It was reducing the chemist to the level of a common huckster. He hoped every Association in the country would take the matter up and put such preparations on the black list.

SHOP-HOURS ACT.

This subject was introduced by the Hon. Secretary, but the opinion was expressed that, as chemists are exempt, it was useless to discuss it. On the other hand, the members present were in favour of a compulsory-closing clause.

Society of Chemical Industry.

LONDON SECTION.

A MEETING of this Section was held at Burlington House, Piccadilly, W., on March 6, Mr. A. Gordon Salamon in the chair. After the minutes of the previous meeting had been read, the members were reminded that nominations for vacancies on the committee must be received by the Hon. Secretary by March 20. It was also mentioned that the circular letter regarding the entertainment of visitors at the forthcoming annual meeting had received a more than gratifying response.

Professor H. E. Armstrong then delivered an address on "The Mechanics of Fire" in which, after alluding to the wicked waste of fuel that goes on year by year, he asked the Society to seriously take into consideration the scientific study of fire. Incidentally, Professor Armstrong noted that the defects in the present educational system tend to make stupid chemists, and he said it would not be a disadvantage if students could, early in their career, take a course of the ethics of disbelief. The lecturer then gave a long and interesting explanation of his theory of reactions, which is, that combinations of atoms are in the nature of electrolytic changes. The ionisation theory he consigned to the limbo of lost theories. Taking as examples the combination of hydrogen and oxygen, and the combustion of hydrocarbons and carbon monoxide, Professor Armstrong showed that the recent work of Dr. Bone and Mr. H. B. Baker confirms his theory that the change that takes place is a complex electrolytic phenomena. "The faculty of imagination is the corner-stone of progress even in industry" were the Professor's final words. A good discussion ensued, in which Mr. H. B. Baker, Dr. Divers, Mr. David Howard, Dr. Coleman, Dr. Cohn, Mr. Friswell, and Dr. Dvorkovitch took part.

A second paper on "The Estimation of Arsenic" was not read owing to the lateness of the hour.

THE MANCHESTER SECTION

has not been so brisk this session, and this week the contribution arranged was not forthcoming, as Dr. Otto Oberländer had been called away to see a sick relative in Germany. Dr. J. Grossmann read a paper on an improved method of testing indigo. Mr. G. H. Hurst afterwards exhibited and explained a number of viscometers.

Chemists' Assistants' Association.

AN exhibition meeting was held at 73 Newman Street, W., on March 2, and as the Junior Pharmacy Ball was held the previous evening, only nine members, of whom three left early, found sufficient energy to attend.

Mr. A. G. C. Paterson showed a few elements which are well-known in combination but are uncommon in the elementary state—silicon, boron, chromium, selenium, nickel, cobalt, and cadmium. He also showed

A NOVEL BOTTLE-CAPPING PREPARATION.

It is a thin opaque material resembling flexible collodion, and is stated to be pure cellulose. It is made into finger-stall-shaped caps, which are kept in water. To cap a bottle one of the caps is placed over the cork, without attempting to draw it tight, and left to dry. After about

six or eight hours it forms a beautifully neat and tightly-fitting cap. The preparation is supplied in three colours, and affords an effective means of capping with the minimum of trouble.

Mr. G. F. Snow, an old member of the Association, sent a beautiful chromalum crystal which was three months in growing and was perfect in form. The President (Mr. Lownsbrough) exhibited the new "Prodew."

MOUTH-WASHING APPARATUS.

This is made of indiarubber, horseshoe in shape, with a channel lined with spongy indiarubber, which is soaked with a mouth-wash. The whole is then put into the mouth, the teeth fitting into the channel containing the mouth-wash, and kept there for a while. It is claimed that by this means every crack and crevice in the teeth and gums is thoroughly cleansed. Another interesting exhibit was an example of a new mounting for natural history specimens, patented by Mr. A. Head, whereby the skin is retained in its soft and flexible condition, so that the specimen may be made to assume any position. Mr. Lownsbrough also showed a series of drawings of the back of the eyes of animals and human beings, by a brother of Mr. Head, who makes a speciality of this work for medical publishers. Another brother specialises as a caterpillar farmer, and breeds all kinds of caterpillars and butterflies in captivity.

The meeting broke up early.

Royal Institution.

It is many years since there has been such a large attendance at the Friday evening discourse at the Royal Institution on March 3. All the available space was taken up half an hour before the meeting began. The Duke of Northumberland was in the chair, and the discourse was by Mr. Marconi on

RECENT ADVANCES IN WIRELESS TELEGRAPHY.

A brief outline of the process of wireless telegraphy and a reference to diagrams of the early and later forms of apparatus used, led Mr. Marconi to define the ends to which his recent researches had been directed—namely (1) independence of communication, (2) increase of distance of transmission, (3) increased efficiency and accuracy of working speed. He then proceeded to answer various objections that have been made in regard to wireless telegrams. In regard to interference or tapping of the messages, the same objection holds against telephone and telegraphic messages, and in the case of wireless telegraphy is got over by a method of attuning or syntonising. It is sometimes, however, an advantage, as in the case of ships in distress, to have a message that can be picked up by other receivers. Messages can be destroyed by interference, but the destroyer cannot read the message. Mr. Marconi then referred to the experiments he had made on board the *Carlo Alberto* warship, lent to him by the King of Italy, which showed that messages can be successfully sent over the land as well as over the sea. It has recently been found possible to use a Wheatstone automatic sender and receiver, and it is thought that the rate of transmission can by these means be increased. In 1898 twelve words a minute could be sent by the ordinary method, whereas to-day twenty-four words is the average. The lecturer then spoke of the curious fact that bright sunlight interferes somewhat with the transmission of wireless telegrams, the distance of transmission in bright sunshine being two-fifths of the distance in the dark. The effect of this is not appreciable between short distance stations. A possible explanation is that the sun is constantly showering ions on the earth, rendering the ether less transparent to Hertzian waves. The weather conditions of England are therefore favourable for carrying out wireless telegraphy. He had been criticised, said the lecturer, because wireless telegraphy does not do what cables do, his answer being that each has a certain field for which it is more particularly adapted. Mr. Marconi explained that the stoppage of the "Times" service of marconigrams was due to the breakdown of the apparatus, which was not yet of that permanent character to warrant the Marconi Company undertaking commercial work across the Atlantic. Several ships of the Cunard Company are fitted with the Marconi apparatus, and regularly publish daily papers on board, the news being sent from the shore by wireless telegraphy. Im-

provements have been recently made in the delicacy of the coherer, on the suggestion of Professor Fleming, which promise much for the future.

Chemical Society.

A MEETING was held at the Society's rooms in Burlington House on Thursday, March 2. The chair was taken by the President, Dr. W. A. Tilden, F.R.S. The first paper was from the Wellcome Chemical Research Laboratories, and was on

THE RELATION BETWEEN NATURAL AND SYNTHETICAL GLYCERYLPHOSPHORIC ACIDS.

By Frederick B. Power and Frank Tutin.

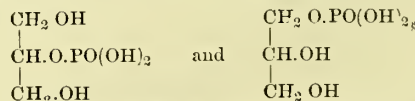
Glycerolphosphoric acid has, until quite recently, been studied almost exclusively by French chemists. For some years past several salts of this acid have been used considerably in medicine, and this was probably suggested by the fact that the acid forms a part of the molecular complex, lecithin, which, on account of its wide distribution in animal tissues, as well as in the vegetable kingdom, is supposed to be of special physiological importance.

Glycerolphosphoric acid was first prepared synthetically by Pelouze (*Compt. rend.*, 1845, 21, 718), and it was obtained at about the same time by Gobley from the yolk of egg. A comparison of some of the salts of the acids from these two sources led Pelouze to the conclusion that the natural and synthetical acids are identical.

By the interaction of phosphoric acid and glycerol it is possible that several esters may be formed, and of these the three following are known, namely—the mono-ester or glycerolphosphoric acid, $C_3H_5(OH)_2 \cdot O \cdot PO(OH)_2$; the so-called di-ester, $C_3H_5(OH) \langle \begin{smallmatrix} O \\ \diagup \quad \diagdown \\ O \end{smallmatrix} \rangle PO(OH)_2$; and the tri-ester, $C_3H_5 : PO_4$. The relative proportions in which these are formed depend upon the varying conditions of time, temperature, and pressure to which the interacting substances are subjected. By several initial experiments the authors have confirmed the observations of Carré (*Compt. rend.*, 1903, 137, 1070) that at temperatures above 110° the mono-ester is associated with varying amounts of the di-ester, and it has also been shown that the discrepancies of statement respecting the characters and composition of the salts of glycerolphosphoric acid, as usually prepared, are due to their containing some of the respective salts of the di-ester. The authors therefore deemed it of interest to prepare the glycerolphosphoric acid by a method which was known to exclude the formation of the di-ester, and have analysed and described several of its salts.

While engaged in this investigation they have considered a recent paper by Willstätter and Lüdecke (*Ber.*, 1904, 37, 3753), who came to the conclusion that the natural and synthetical glycerolphosphoric acids are not identical, and that the differences are greater than those existing between optically active compounds and the corresponding racemic ones. The differences noted, however, consisted chiefly in the amount of metal contained in the calcium and barium salts of the respective acids, and in the amount of water which was believed to be retained by them when heated at certain temperatures.

The authors have shown that the conclusions of Willstätter and Lüdecke are quite invalid, inasmuch as the salts of the synthetical acid prepared by them must have been contaminated with those of the di-ester, a fact which they appear to have completely overlooked, and which would explain to a considerable extent the differences they had observed. The question as to the actual constitution of the natural and synthetical glycerolphosphoric acids the authors hope to be able to further elucidate by the synthesis of both the symmetrical and unsymmetrical forms of the acid—



and by comparing these, on the one hand, with a completely racemised natural acid, and, on the other hand, with the mono-ester obtained by the interaction of phosphoric acid and glycerol.

The next paper, on the

TRANSMUTATION OF GEOMETRICAL ISOMERIDES, was read by Mr. A. W. Stewart. It gave a new explanation of the mechanism by which such transformations as that of fumaric into maleic acid occur. The author assumed that under these circumstances two molecules of the initial substance condense to form a tetramethylene derivative, which then undergoes symmetrical fission in a new direction, forming the isomeric transmutation product. The discussion on this paper drew commendatory remarks from Professor Collie as to the ingenuity and wide applicability of Mr. Stewart's explanation of these rather mysterious transformations.

LININ

was the subject of the next paper, which was contributed from the Pharmaceutical Society's Research Laboratory by Mr. J. S. Hills and Professor W. P. Wynne. Linin has generally been regarded as the active purgative principle of *Linum catharticum*, but the authors gave good reason for supposing that this is not the case. They extracted the plant with alcohol, distilled off the latter, and dissolved the residue as far as possible in water. This solution, when freed from extractive and colouring matters by precipitation with lead acetate, was found by actual trial to be strongly purgative, but no crystalline substance could be induced to separate from it. When, however, a mineral acid was added and the mixture boiled, a precipitate formed and the liquor became highly reducing to Fehling's solution. The precipitate thus separated was crystalline linin. It formed long, silky, colourless needles, had the formula $C_{23}H_{24}O_9$, melted at 205° - 208° , dissolved in alkalis, and was reprecipitated by acids; it contained three methoxyl groups but no hydroxyl groups, and gave a violet purple coloration with strong sulphuric acid. Mr. Hills stated that he had taken as much as 0.2 gram of linin without experiencing any effects, and he concluded therefore that it was devoid of physiological activity and that the purgative substance in the drug must be the glucoside which yields linin as the result of the hydrolysis which takes place when the aqueous liquid is boiled with sulphuric acid.

The remaining papers were taken as read, and the meeting was adjourned till Wednesday, March 15.

Thames Valley Chemists' Association.

A MEETING was held at the Kingston Hotel, Kingston-on-Thames, on Wednesday evening, March 8, Mr. C. J. Palmer presiding. There were also present Messrs. A. Higgs, J. P. Parrott, Woolcock, Turner, Proctor, Wellburn, Durbin, Blanchford, Cuff, Bunker, jun., L. Higgs, Doe, Harris, Simpson, Kent, Barnett, and F. Harvey (Hon. Secretary).

The Chairman, in opening the proceedings, announced that the annual dinner will take place at Kingston on April 12 and reminded members that the Pharmacy Bill is down for second reading on March 24. He advised them to write to the members of Parliament in the district covered by the Association urging them to support the Bill. The Secretary, he added, would also write to the members on behalf of the Association. Mr. Palmer then introduced Mr. C. J. G. Bunker, of Twickenham, to deliver a lecture on

HOW TO BECOME AN OPTICIAN.

In order, he said, that the study of optics by chemists should be successful, it is necessary that it should be done in a whole-hearted manner, and that all possible opportunities for practical work should be taken advantage of. He related his own experience in the matter. Formerly he had sold glasses in a haphazard manner, with practically no credit to himself—and not much profit. However, in 1897 he was strongly advised to go into the study of sight-testing thoroughly, and the two books he read were "The Optician's Handbook" and Hartridge's "Refraction of the Eye." Those he read again and again, until he had learned some of the principles of sight-testing. He also attended classes, obtained a diploma, then started practical optical work. As each case came for testing he had more and more opportunities of improving his knowledge. To make a sight-testing optician it is necessary not only to have a knowledge of the subject, but a knowledge of when a case was not for the optician, but for

the doctor. He advised his hearers not to be afraid to send a good customer away, for they would gain their goodwill more by doing this than by trying to do something that might prove unsatisfactory. They should never be sure of a thing until they had proved it, and should not expect tremendous profits. In the earlier part of his paper Mr. Bunker referred to the various bodies interested in the study of optics. The jeweller-opticians, he said, had a powerful organisation called the "National Association of Goldsmiths," which has undertaken to look after their interests, and it was only natural, he added, that the chemist-opticians should try their best to do the same, and, thanks to THE CHEMIST AND DRUGGIST, a society was started nearly a year ago which had developed as the Society of Chemist-Opticians, and now numbers over a hundred members. This Society, within a very short time of coming into existence, was able to do some good work for chemists, as the Secretary (Mr. Cuff) and the lecturer were invited to meet the Court of Spectacle-Makers' Company *re* their syllabus, and as a result a concession to Minor men was allowed—viz., exemption of the whole of Section A and part of Section B in the first or special examination. The Society was also represented at the inauguration of the Institute of Opticians, and, lastly but by no means the least, the Council of the Society were asked to send two representatives to the recently constituted Board of Opticians, which they hoped would do a power of good for the optical industry. At the close of his paper Mr. Bunker described the various kinds of lenses employed in optics, and explained in detail the formation of the human eye and other matters connected with the subject. An interesting discussion followed, and a hearty vote of thanks to the lecturer closed the proceedings.

Bradford Chemists' Association.

A MEETING was held on Tuesday evening, March 7, at the Royal Hotel, Bradford. The President (Alderman Dunn) presided, and there was a large attendance.

Letters were read from the three members for Bradford in regard to the Pharmacy Bill. Mr. J. L. Wanklyn, M.P., who had at an earlier period promised to back the Pharmacy Bill, wrote saying that he could not now do so because of certain heavy work that he had on hand, but he promised to endeavour to be in his place and to vote for the second reading. Sir Ernest Flower, M.P., wrote that he was in general sympathy with the Bill, and would make every effort to attend. Captain Greville, M.P., promised his most careful and favourable attention.

The Chairman then introduced Mr. John Harrison, of Sunderland, who gave an address on

THE PHARMACEUTICAL POSITION.

Mr. Harrison said the efforts expended on Pharmacy Bills during the past two or three years must not be accounted as altogether wasted, because every Bill had a considerable educational influence, and he saw distinct signs now that many of those who three years ago had looked with suspicion on their efforts see that they had the interests of the public at heart as well as their own. Gentlemen who had formerly refused to have anything to do with their Bills now promised support. He briefly sketched the proceedings which had led up to this present Bill, and illustrated the manner in which the Companies Acts are used for the purpose of evading the Pharmacy Act by the Cardiff case decided last week, where the Stipendiary Magistrate held that the decision of the House of Lords permits companies to ignore the poison regulations, thus showing how absurd the law is at the present time, and how urgent it is that it should be altered as soon as possible, not only in the interests of the chemists, but in the interests of the public. He then spoke of the original Clause 7 (a reasonable and equitable and fair one), upon which the Council had made a compromise that would commend itself to all fair-minded people, while it conserves and preserves the principle of the Pharmacy Act. They had been told that they might have waited until the Bill got to the Committee stage and then have made this concession if necessary, but the answer to that was that they must first be sure of getting to the Committee stage, and it seemed highly improbable that they would get there at all if they did not concede first.

He thought the Pharmaceutical Council had in this matter pursued a perfectly fair and reasonable course, and hoped the whole body of chemists throughout the Kingdom would do as the Bradford chemists had done, and with equally satisfactory results. Mr. Harrison then spoke on the organisation question, and, referring to the Pharmaceutical Society's financial position, said there is no cause for alarm; the Society is by no means likely to be pressed for money in the near future, and there is no likelihood of it having to slacken its work. At no time, he added, could the success of the Society's efforts, which are not of a trading or money-making nature, be measured by the amount of money at the bankers, but always the test would be the efficiency of the services rendered to its constituency.

In the course of the discussion which followed, the Chairman pointed out the advantages which would accrue to traders from a measure making the compulsory disclosure of the names of the partners in a firm. Alluding to Clause 7 of the Pharmacy Bill, he attributed the suggestion that the clause was too drastic to the fact that many members of the Government, as well as Government officials, are interested in drug companies. He spoke of the great advantages arising from the more frequent contact in later years of the members of the Pharmaceutical Council with the members of the associations assembled at their meetings, and said he was sure that the Pharmaceutical Society had greatly gained by this, and that it would be good for the Society to offer the payment of expenses to the members of the Council to encourage them to do more of such visitation. He moved a vote of thanks to Mr. Harrison. Mr. D. S. Priestley, in seconding, said that the action of the Society in taking proceedings in the Cardiff case seemed wholly inconsistent with a statement made by the President of the Society in a letter to the Bradford Association that the companies are outside Section 15. The resolution was supported by Mr. Silson, and carried. In replying, Mr. Harrison said that in taking up

THE CARDIFF CASE

the Council felt pretty certain that it was covered by the House of Lords' judgment, and did not expect a verdict, but the case was so flagrant that they thought it well to bring it into court as an object-lesson. The company sold strong poison without using the precaution of putting it into the proper poison-bottles such as the chemist must use. And it was held that because the sale was by a company it was not necessary that this precaution, which would always be taken by the proper qualified man, should be taken by the company. The Council desired to bring to public attention the gross absurdity of such a state of things, and of the decision of the House of Lords. It was sometimes worth while to go into the courts merely to have demonstrated in a forcible way a position for which one had long been contending, and it was so in this case. The meeting then ended.

Sheffield Pharmaceutical and Chemical Society.

A MEETING of the above Society was held at the Montgomery Hall on March 9, Mr. H. Antcliffe (senior Vice-President) presiding, in the absence of the President. There were also present Messrs. H. G. Williams (Hon. Secretary), G. T. W. Newsholme, F. A. Upsher-Smith, J. Gilbert Jackson, P. Carr, J. Austen, G. Squire, F. Medley, F. W. Whitworth, and others.

Mr. C. A. Gardner was elected a member of the Society. The following paper was then read:

NOTES ON COMPOUND LIQUORICE POWDER.

By John Evans, A.I.C., F.C.S.

Compound liquorice powder prepared according to the directions of the British Pharmacopœia contains:

Senna, in fine powder	...	16.67	per cent.
Liquorice-root, in fine powder	...	16.67	" "
Fennel-fruit, in fine powder	...	8.33	" "
Sublimed sulphur	...	8.33	" "
Refined sugar, in powder	...	50.00	" "
		100.00	

This preparation is now manufactured on a very large scale, and competition is so keen, that the retail pharmacist

who does not manufacture his own compound liquorice powder, should satisfy himself that his sample is prepared in accordance with the British Pharmacopœia. Instances of adulteration have been recently recorded in which maize starch and ground olive-stones have been used as adulterants. Careless manufacture would account for two instances in which the sulphur was present to the extent of 16 per cent. or entirely omitted. The unscrupulous manufacturer has ample scope for adulteration in the preparation of this article. Not only can he add such extraneous substances as ground olive-stones, maize starch, inferior dusty senna, etc., but he can also utilise exhausted drugs. Several observers have called attention to the prevalence on the continental market of adulterated fennel. The fruit is deprived of its oil by distillation, either in a current of steam under pressure, or while suspended in water; or it is partly exhausted by maceration in alcohol. The last-mentioned is the residual fennel of the compound spirit and hollands distilleries. Fennel-fruit used in the preparation of compound liquorice powder should contain its full proportion of essential oil. To fix a standard of essential oil in compound liquorice powder is, however, not practicable, as the proportion is very small and can only be ascertained by distillation of a considerable quantity.

The following standards for compound liquorice powder have been suggested:

1. The Local Government Board (Ireland): Ash, 4.5 per cent.

2. J. C. McWalter ("Pharm. Jour." 1902, ii. 89): Moisture, 4 to 6 per cent.; ash not above 5, and soluble ash not exceeding 3 per cent. Not less than 4 per cent. should be yielded to 70-per-cent. alcohol. (This presumably means the percentage of extractive in the tincture.)

3. C. G. Moor ("Suggested Standards of Purity for Foods and Drugs"): Moisture should not exceed 6 per cent.; ash, about 4 to 5 per cent.; soluble ash, about 2.5 per cent.; sulphur, 8 per cent.

H. W. Gadd ("Year-book Pharm." 1901, p. 390) gives the following results of the analysis of three samples of compound liquorice powder:

	A	B	C
Moisture per cent. ...	6.35	5.4	4.15
Ash per cent. ...	4.5	4.5	4.3
Soluble ash per cent. ...	2.8	3.15	2.68
Extractive in tincture per cent. ...	4.83	3.73	4.47

The tincture was prepared by macerating 5 grammes of the powder in 70 c.c. of 70-per-cent. alcohol. It should be borne in mind that alcoholic extracts of compound liquorice powder must necessarily contain the whole of the sugar. (100 c.c. of 70-per-cent. alcohol will dissolve 17.8 grams of cane-sugar.) Thus the figure is of little value as a standard, since the solids of the tincture contain a large amount of sugar together with a smaller amount of extractive matter.

The following methods of analysis were employed by Mr. Evans:

Moisture.—Dry 5 grams of the sample in the water-oven at 100° C. until the weight is constant, and note the loss of weight, which represents the moisture. In the samples examined the moisture varied from 3.7 to 4.2 per cent.

Ash.—Ignite 5 grams of the sample in a crucible, weigh the ash, and treat with boiling water, filter, wash, dry, ignite and weigh the insoluble portion. The difference between the total ash and the insoluble portion gives the amount of soluble ash. The following figures for ash were obtained with thirty commercial samples of compound liquorice powder:—

	Maximum	Minimum	Average
Total ash... ..	6.78	4.36	5.35
Insoluble ash	3.98	1.62	2.54
Soluble ash	3.20	2.48	2.80

A further sample of somewhat anomalous character gave : Total ash, 7.95; insoluble ash, 5.34; soluble ash, 2.54; ash insoluble in hydrochloric acid (sand), 3.85 per cent. Judging from this high proportion of siliceous matter, it is probable that this sample contained "sweepings," or was prepared from inferior drugs.

From the ash standards suggested by J. C. Umney the amount of mineral matter that should be present in compound liquorice powder is calculated thus :

Ingredients per cent.	Ash in Drug per cent.	Proportion of Mineral Matter from Ingredients per cent.
Senna 16.67	14	2.33
Liquorice root... 16.67	4	0.67
Fennel fruit ... 8.33	10	0.83
Sublimed sulphur 8.33	—	—
Sugar 50.00	—	—
100.00		3.83

In a specially-prepared sample, Mr. Evans calculated the mineral matter as 3.68 per cent., and found it to yield 4.66 per cent. of ash. Thus these calculations of the percentage of mineral matter in compound liquorice powder are of little value, since the sulphur present combines with the mineral constituents of the ingredients forming sulphides, sulphates, etc., thus increasing the proportion of ash. The author suggested a maximum limit of 5 per cent. of ash, the standard of the Local Government Board (Ireland) of 4.5 per cent. of ash being somewhat too stringent. No useful standard for soluble ash can be fixed, owing to the presence of sulphur, which not only causes an increase in the percentage of total ash, but also a decrease in the insoluble, and a consequent increase in the soluble ash. This is due to the formation, for instance, of the soluble calcium sulphate from the insoluble calcium carbonate.

The disturbing action of the sulphur in the determination of the total and soluble ash of compound liquorice powder does not appear to have been previously noticed, but it is a highly important factor.

Sulphur.—Weigh out 1 gram of the sample and add about 20 c.c. of fuming nitric acid, a little bromine, and a few crystals of potassium chlorate. Add the latter in small quantities at a time while the liquid is boiling gently. A clear solution is thus obtained. Evaporate with excess of pure hydrochloric acid to a very small bulk, and treat the residue once more with hydrochloric acid and again evaporate to a small bulk. When cool dilute with water, filter, and wash with boiling water. Determine the sulphuric acid in the filtrate as barium sulphate. Then the weight of BaSO_4 found $\times 0.1373 \times 100$ will give the percentage of sulphur. It will be found that the results obtained by this process are somewhat higher than the actual added sulphur in the sample, since the senna, liquorice, and fennel in the preparation together contain naturally about 0.3 to 0.5 per cent. of combined sulphur. An alternative method of determining sulphur consists in treating a known weight of the sample with carbon disulphide, filtering, and washing the filter with the solvent, distilling off the carbon disulphide, and weighing the residue as sulphur. The amount of extractive matter yielded to the carbon disulphide is very small, and may be neglected.

Alcohol Extract and Sugar.—Weigh out 2 grams of the sample, place in a flask, and add 100 c.c. of 70 per cent. alcohol. Set aside for three to four hours, shaking frequently. Filter off 50 c.c., which represents 1 gram of the sample, and evaporate in a tared dish over the water-bath. Dry in the water-oven and weigh. The extractive in this case represents not only the extractive yielded by the senna, liquorice, and fennel, but also the sugar, which is entirely soluble in the 70-per-cent. alcohol. The proportion of sugar may be determined as follows: Take another 25 c.c. of the alcoholic solution (0.5 gram of the original sample), dilute with water, invert with dilute

acid in the usual manner, neutralise and make up to a known volume with distilled water. Determine the invert sugar in the solution by means of the well-known gravimetric Fehling method. Then the total extractive, less sugar, gives the amount of extractive yielded by the senna, liquorice, and fennel of the sample. Mr. Evans has found this figure to vary from 10.5 to 13.5 in authentic samples. It can rarely, if ever, fall below 9.0 in genuine samples. If a less proportion than 9.0 be found, it is probable that either exhausted ingredients are present or that some extraneous substance, such as starch, has been added.

A careful microscopic examination will show the presence of most foreign additions. The various starches may also be identified by the microscope.

The following table gives the results of an analysis made by the author of five samples of compound liquorice powder :

	1	2	3	4	5
Moisture	3.86	4.20	3.98	3.68	3.84
Total ash	5.12	6.54	4.84	4.88	4.66
Insoluble ash	2.16	3.98	2.36	2.00	1.68
Soluble ash	2.86	2.56	2.48	2.88	2.98
Alcohol extract	60.52	60.16	60.08	63.44	63.10
Sugar	50.0	47.7	49.2	50.0	49.6
Alcohol extract (less sugar)	10.52	12.46	10.88	13.44	13.50
Sulphur	8.92	8.49	8.91	8.90	8.78

Samples 4 and 5 were prepared by the writer, the remainder are commercial samples.

DISCUSSION.

The Chairman, in expressing the thanks of the meeting, said that the thing which appealed to the ordinary pharmacist was the rough and ready way of taking an analysis by the ash. It did not seem very clear from the standard of the Local Government Board of Ireland and he thought there was scope for some definite ash-percentage.

Mr. Upsher-Smith said the question of ash to which Mr. Evans drew attention was really of great importance, showing that the ash-yield was practically valueless, because by varying the quantities of sulphur and sugar you may gain in the powder almost any ash-value you want to get. It seemed to him that the alcohol extract was a useful indication, as showing whether the vegetable drugs had been exhausted or no.

Mr. P. Carr said that from a commercial point of view the great discrepancies in the analyses were not to be wondered at. They never got two samples of compound liquorice powder alike, even from the same house—there was such a great variation of colour.

Mr. Austen said he had often examined samples under the microscope, and thought it would be a good thing to have two microscopes on the counter showing "our own make" and the others. He referred to a case in Sheffield some time ago, where a number of persons had been poisoned by taking compound liquorice powder. It was discovered that the wholesale house had substituted stramonium for senna, and the local chemist had made it up.

Mr. Newsholme, in proposing a vote of thanks to Mr. Evans for his valuable paper, said that it seemed to him that the best test was the extractive. Competition in articles of this kind ought to be out of the question in the way of drug-selling, but if the public were determined to have cheap medicines they must have such stuff as had been shown on the screen to-night.

Mr. G. Squire, in seconding, said there was a moral to the paper in the discrepancies shown, and that was that pharmacists should make their own compound liquorice powder.

The resolution of thanks was carried with heartiness, and Mr. Evans suitably responded, and replied to one or two of the points raised in the discussion.

DRUGS AND CHEMICALS valued at 227,000*l.* were imported into Cape Colony during the eleven months ended November, 1904, against 338,000*l.* for the corresponding period of 1903.

Information Wanted.

Inquiries for the names and addresses of manufacturers, or other trade information, not traceable by reference to the advertisement-pages of "The Chemist and Druggist" and the "C. & D. Diary," or not filed in our private register, are inserted here free of charge. Postcard or other replies to the subjoined inquiries (addressed to the Editor "The Chemist and Druggist," 42 Cannon Street, London, E.C.), will be esteemed.

156/70. Makers of "Paramaph," originally made at Wye, Kent.

127/20. Who makes a machine for rolling and cutting bandages?

149/10. Address of makers or agents for Marshall's cubeb cigarettes.

155/45. Who makes bottles of ceresin wax used for holding hydrofluoric acid?

150/6. Makers of a new muffle-furnace shown by Mr. H. H. Cunyngham, C.B., at the last exhibition of the Royal Society.

150/63. Who are the makers of the patent barb stopper for sauce and other bottles?

180/28. Name and address of the makers of Perry's Barm of Syriacum.

Festivities.

A Dewsbury Dinner.

THE annual dinner of the Dewsbury Chemists' Association took place on March 2. There was a large attendance, including Dr. C. Symes, of Liverpool, and delegates from the Leeds, Bradford, Huddersfield, Halifax, and Wakefield Associations. Mr. J. Rhodes (President) presided. After the loyal toast, Mr. S. N. Pickard submitted the toast of "The Pharmaceutical Society of Great Britain." He referred to the objects for which the Society was started in 1841—education, benevolence, and the protection of the interests of chemists. Educationally great advances had been made, but it is doubtful whether the position which chemists occupy to-day is worth the time that has to be devoted to study and the expense students are put to. He appealed to all present to support the Benevolent Fund as liberally as possible. The time might come when they would need assistance. Mr. Pickard went on to say that the Society had lamentably failed to carry out the third object. The Cardiff case showed that there is something wrong somewhere. He doubted whether the Society have tried to get all they could out of the 1868 Act. It is the duty of the Society to protect chemists who had justly earned their titles. (Hear, hear.) Dr. Symes, acknowledging the toast, said everyone is better for systematic training; he (Dr. Symes) thoroughly believed in it, but he is not in favour of a compulsory curriculum. He would like to see the examination divided. (Hear, hear.) As to the questions raised by Mr. Pickard, he thought the new Bill would meet some of the difficulties. Many Bills had been prepared, and some of them had passed the first and second reading, but none of them had been read a third time. In all these Bills an effort was made to remedy the defects of the 1868 Act. The present Bill, he believed, would protect the titles more than appeared on the surface. If they did their best to help forward the Bill they would not only be benefiting themselves, but the public as well. Dr. Symes alluded to the Benevolent Fund, which he said should be kept on a broad basis. It would be very narrow to restrict the benefits to members only, specially as men outside the Society had contributed to the fund. "Kindred Associations" was proposed by Mr. R. Gledhill, and responded to by Mr. Jackson (Bradford), Mr. Beecock (Leeds), Mr. Tiffany (Halifax), and Mr. Judge (Wakefield). Mr. R. C. Walshaw (Huddersfield) proposed "The Dewsbury Association," and Mr. R. Broadhead replied. The last toast was "The President," this being given by Mr. A. B. Barker.

A Lancashire Dinner.

THE annual dinner of the North-East Lancashire Chemists' Association was held at the White Bull Hotel, Blackburn, on March 2, a company of fifty gentlemen sitting down. The President (Councillor T. Critchley, J.P.) was in the chair, and he was supported by Alderman R. Shorrocks, of Darwen, Messrs. W. Wells, W. Holt, and R. Lord Gifford (the Vice-Presidents), Mr. J. R. Young, of Warrington (Vice-President of the Pharmaceutical Society), Mr. F. Pilkington Sargeant, of Leeds, and others. After the loyal toasts had been honoured, Alderman Shorrocks submitted "The Pharmaceutical Society." He said he had a very high opinion of the Council, which he believed to be made up of men who did the best that was possible to do in the interests of the pharmacist. They had a difficulty in the way of accomplishing all they would like, and the Pharmacy Act did not give them as much power as they ought to have. Replying to the toast, Mr. J. R. Young dwelt especially upon the importance to the trade of the young men engaged in it being educated in pharmacy so as to enable them to qualify thoroughly in the profession. Referring to Mr. Gifford, he spoke of him facetiously as a very extraordinary man—one with an amazing earnestness, who would push to the front anything that he took up. He had a habit of occasionally kicking over the traces. He sometimes took the bit in his mouth and bolted. (Laughter.) And when a horse did bolt they knew that generally there were ructions! Then when he was brought quietly back to his stable they had to put the animal on low diet—bran-mash, perhaps. (Laughter.) The recovery was generally rapid, and then the horse settled down to good collar-work. (Laughter.) Continuing, Mr. Young said every member of the Council is full of earnestness and is impressed with the seriousness of the cause they have taken up. He asked the trade generally not to quibble about trifles and to worry over matters, but to give their representatives on the Council a free hand to use their discretion to promote the best interests of chemists. Mr. R. Lord Gifford also replied. At the outset he said that twenty-five years ago he was Mr. Young's assistant, and probably neither of them thought in those days that the time would come when they would sit together at the Council-table whence the decrees of pharmacy emanated. The ordinary pharmacist does not wish his life to be stagnant. He simply asked for fair play and a fair field and no favour, so that his own energies, ability, and enterprise should have a fair chance of proper development. (Hear, hear.) They must get elementary justice. They had it on the highest authority that a coach and four could be driven through any Act of Parliament. Their case was most notable in that respect. A short time ago Mr. Joseph Cross (Secretary of the Textile Factory Workers' Association), addressing a meeting at Blackburn, declared that the Taff Vale decision provided the first instance where the judges of this country had actually altered the law of the land. But that was not so, for a similar thing happened, so far as chemists were concerned, in 1880, and it behoved the trade to insist that if their just prerogatives were interfered with, the matter should be righted. (Applause.) The toast of the "North-East Lancashire Chemists' Association" was submitted by Mr. F. Pilkington Sargeant, and Mr. A. H. Garland (Hon. Secretary of the Association) replied. "Our Guests" was submitted by Mr. E. Highte, Mr. J. Hetherwich responding; and the last toast, "Our President," was honoured on the proposition of Mr. J. E. Parker. The speeches were interspersed by some capital music, supplied by Mr. Jonas Hindle and party, and also by Mr. J. Muirhead, of Lytham, who contributed some excellent humorous pieces.

The Glasgow Dinner.

A VERY successful dinner of chemists of Glasgow took place in Grosvenor Restaurant on March 8, under the joint auspices of the Glasgow Pharmaceutical Association and the Glasgow Trade Association. Covers were laid for ninety people, Mr. W. L. Currie being in the chair, and Messrs. J. Murchie and Thomas Dunlop officiating as croupiers. The guests included Mr. R. A. Robinson (President of the Pharmaceutical Society), Mr. D. Storrar, Professors Stockman and Bower (Glasgow University),

Dr. Clark, C.M.G. (President of the Glasgow Faculty of Physicians and Surgeons), Messrs. Rutherford Hill, Forrest, and Currie (Edinburgh), Mr. A. M. Robertson (one of the founders of the Glasgow Association, and now its Honorary President), and Messrs. Marshall and Mechan. Apologies were read from the Lord Provost of Glasgow and Mr. Brodie (another original member of the Association). The toast of "The King" having been given from the chair.

Mr. J. P. Gilmour proposed "The Medical Profession" in a speech dealing with the relations between doctors and pharmacists. He urged that prescriptions should be made State property, that physicians should remove one cause of embarrassment to chemists by indicating on prescriptions unusually large doses, and that the evils of counter prescribing would disappear with the distinct separation of prescribing and dispensing. He also emphasised the misfortune of the growing practice of prescribing proprietary articles.

Dr. Clark, whose admirable services in the South African war Mr. Gilmour commented upon, replied for the medical faculty, over which he ably presides in Glasgow. In a capital after-dinner speech he touched sympathetically on the inroads made on chemists' profits by dispensing doctors, grocers' shops, and company stores. He did not regard it as possible that dispensing would pass altogether into pharmacists' hands, nor could counter prescribing be absolutely done away with. He expressed his high appreciation of the admirable work Glasgow chemists are doing, and made generous acknowledgment of the assistance they gave by checking the doses in prescriptions.

Mr. Rutherford Hill next gave the toast of "The University of Glasgow," coupling it with the name of Professor Bower, a former examiner to the Pharmaceutical Society. Mr. Hill raised a hearty laugh by declaring that Professor Bower was the only examiner he had ever met against whom he had never received a complaint from a student. Mr. Hill expressed his appreciation of the service Professor Bower had rendered in forwarding their wishes to secure a university science degree associated with pharmacy.

Professor Bower, responding, said he hoped before long that the University of Glasgow would possess the power of granting degrees in pharmacy, but at the present moment the uncertainty of the political situation was an obstacle.

The toast of the evening,

THE PHARMACEUTICAL SOCIETY OF GREAT BRITAIN,

was entrusted to Professor Stockman, who, after referring in high terms to the splendid work that is being done by the Society's School of Pharmacy, said a friend of his, a chemist and examiner to the Society, had often spoken to him of the very high standard pharmaceutical students attained as chemists. He (Dr. Stockman) once asked him how they compared with medical students, and the reply he got was that medical students know absolutely no chemistry. Pharmacy students know it properly; they have handled things and have done the operations. (Applause.) Dr. Stockman added he was glad to say universities are also to take part in pharmaceutical education. A new materia medica department is being erected in Glasgow University, and in that department he had been asked to make provision for the teaching of pharmacy, with a view to a new ordinance creating a degree in pharmacy, and he had left sufficient accommodation to meet the necessities of pharmaceutical students. He was looking forward with pleasure to having a colleague and adviser who knew practically the materia medica requirements of a chemist and druggist. Professor Stockman added they are under an obligation to the Pharmaceutical Society for the great interest they take in the Pharmacopœia and its preparation. The General Medical Council are extremely grateful for the help they have always got from pharmacists, and the Council recognise that they could not get on without it.

Mr. Currie, calling upon the President of the Society to respond to the toast, said he (the President) had come all the way from London specially for that function. This was the first occasion (Mr. Currie added) on which a President of the Pharmaceutical Society had come to a social function in connection with the chemists of Glasgow, and they welcomed him with acclamation.

The President, in his reply, stated that he had spent a very pleasant part of his honeymoon in Glasgow, and had for many years been a shareholder of one of the great

industries of the Clyde. Mr. Robinson proceeded to explain the changes in the Major and Minor examinations, pointing out that the Council desired to make both more practical. They had no desire to make the curriculum for the Minor such that only their own school in Bloomsbury Square could supply it. Turning to the commercial side of the profession, he said the Council is most anxious to do anything it can to promote the material prospects of its members. Chemists have great difficulties and great opposition to content with, but let them not be downhearted; let them put before Parliament what they believed to be their grievances, and what they thought ought to be their just redress, and he had great faith that in no long time the House of Commons would listen to the position of affairs which needed remedying. From this the President went on to speak of the Pharmacy Bill, explaining the effect of the alteration made on Clause 7, and stating that they had the right to ask that the director of a company in charge of a pharmaceutical department should be a qualified chemist. He did not know that the Government is going to accept that, but they had told him that is a more reasonable attitude to take up than their previous one. The Government did not take the view of the Council altogether. They thought it was enough if the man who sold was qualified, but he pointed out to them that that was contrary to the spirit of the Act of 1868. The Bill is down for second reading on March 24, and he urged upon the chemists of Glasgow to do all in their power to impress upon the Government, through their Members of Parliament, not to place obstacles in its way. He wanted the Government to be told that facilities ought to be given to a measure of this kind passing into law in the public interest, and he suggested that Glasgow constituents should approach Mr. Bonar Law, as a member of the Government, to use his influence with the Prime Minister to give facilities for the passing of the Bill. Mr. Robinson further explained the action of the Council in bringing pressure to bear on local authorities with a view to stopping vexatious prosecutions under the Food and Drugs Act, in cases where it was evident no contravention of the Act really occurred, and in conclusion he made a strong appeal to local chemists to lend their active support to the Society by joining its membership.

Mr. G. F. Merson proposed the toast of "The Local Associations," and Dr. A. M. Robertson, Honorary President of the Association, replied, giving some interesting reminiscences of the early history of the Society from 1847 onwards. Mr. Currie, as President, replied for the Glasgow Pharmaceutical Association, and Mr. J. W. Sutherland, President of the Trade Association, replied for that body. Other toasts were "Kindred Associations," proposed by Mr. J. Foster, Mr. Forret and Mr. A. Currie, of Edinburgh, replying; "The Visitors," given by Mr. Dunlop and acknowledged by Dr. Marshall; and "The Croupiers," by Mr. Boyd, to which Mr. Dunlop replied.

Trade Notes.

THE TASMANIAN EUCALYPTUS OIL Co. will show their pretty chameleon signs at the Chemists' Exhibition.

OOWANA, LTD., 26 Red Lion Square, W.C., are now producing their shaving-soap in bowls, and their toilet-soap in wooden bowls for the bath.

MESSRS. PHILIP JOSEPHS & SONS, shopfitters, Old Street, E.C., inform us that next week they are to place in the Chemists' Exhibition a completely fitted pharmacy, which will be for sale.

UNDER "DISINFECTANTS" in the *C. & D. Diary*, Buyers' Guide, p. 212, we should be glad if subscribers would enter p. 43 referring to MESSRS. A. Boake, Roberts & Co.'s advertisement of "Sulphume."

MESSRS. EVANS SONS LESCHER & WEBB, LTD., 60 Bartholomew Close, E.C., announce that they will have a special exhibit in their showroom there next week, and give a general invitation to chemists to visit it.

"SURCO" ELASTIC HOSIERY.—The Surgical Hosiery Co., Ltd., Colwick, Nottingham, are the makers of the "Surco" patent elastic abdominal supporter and elastic stockings, the forms of which they illustrate and describe in an advertisement in this issue.

THE WAND MANUFACTURING CO., LTD., of Leicester, show their capability in the production of pills, capsules, perles, and compressed tablets by illustrations from one post—namely, 3 doz. gelatine-coated pills to a doctor's prescription, and one from a shipping firm, 4,200 gross of pills and 1 cwt. tablets, to be despatched by the first steamer.

ROSE'S LIME JUICE AND CORDIAL are after March 31 to be supplied by the makers (Messrs. L. Rose & Co., London, Leith, and Dominica, B.W.I.) on the condition that they are not sold under the minimum retail prices—namely, 1s. per bottle for the juice, and 1s. 2d. per bottle for the cordial. The firm invite the co-operation of the trade in maintaining these prices.

A SPONGE SHOW IN LIVERPOOL.—Mr. Samuel J. Goldhill, of Messrs. John Goldhill & Sons, 17 Houndsditch, E.C., will, at the Hotel St. George, Lime Street, Liverpool, from Monday, March 13, until Friday, March 17, show a large stock of sponges especially suitable for chemists' trade, and the firm give a cordial invitation to chemists of the district to visit the display.

MODERN SHOP-FITTING is graphically illustrated in this issue in a series of pictures of pharmacies which have been equipped by Messrs. Parnall & Sons, Ltd., of Bristol, London, and Swansea. These particularly exemplify the growing taste for attractive and novel frontages which give full scope for the window-dressing art, and there are points in the interior arrangements well worth study.

PHOTO CHEMISTS AND DEALERS are invited to send to Messrs. Hazell, Watson & Viney, Ltd., 52 Long Acre, W.C., for a specimen copy of the "Photographic Traders' Gazette," a new volume of which begins this month. The subscription is but 1s. 6d. a year, and the publishers are so sure of the journal satisfying readers that they offer to return their subscription if the "Gazette" fails to please.

TABLOID DEVELOPER COMPETITION.—Messrs. Burroughs Wellcome & Co., Snow Hill Buildings, E.C., are supplying leaflets for distribution by the trade regarding the prize competition they have organised for photographs produced with tabloid pyro-metal developer. Prints have to be sent in on or before May 15. Photographic chemists should note that there are three prizes offered to those dealers from whom the prize-winners purchased their developer.

THE "EUREKA" ALBION elastic-web bandage, made by Mr. Vincent Wood, Albion Place, Blackfriars Bridge, S.E., is a light spiral bandage, which is now produced with a foot-piece at one end and tapes at the other. Many who suffer from varicose veins prefer a bandage to a stocking. This webbing is specially adapted for export, as it stands exposure to varied and high temperatures. Mr. Wood will be pleased to send his catalogue to shippers, and to furnish samples and quotations.

"NONSUCH" ELASTIC WEBBING.—Messrs. John Swann & Sons, Alfred Street Mills, Nottingham, are manufacturers of elastic webbing, surgical bandages, etc., and have introduced a patent webbing for bandages which merits the attention of chemists and exporters. The elasticity of this webbing depends in part upon elastic threads (three to the inch) and also to the goffering of the cotton web, whereby the maximum of elasticity and porosity are obtained. A web of this character is specially adapted for varicose veins, and it has the additional advantage of being easily washable without injury to the elasticity.

"OPEN INDENTS FOR SOAPS" is the title of this week's advertisements by Messrs. Edward Cook & Co., Ltd., the soap specialists, Bow, E. This well-known house has a world-wide reputation in the production of household and toilet soaps, and during recent years they have specialised particularly in toilet-soaps for chemists' sale. We observe that on Tuesday of next week every advertiser in the "Want" columns of the "Evening News" is to receive a box of three tablets of Cook's "Throne" toilet-soap. This should stimulate the retail sales of this excellent soap.

NEW LISTS.—Messrs. Burgoyne, Burbidges & Co., wholesale druggists, 12 and 16 Coleman Street, E.C., send us copies of their new catalogue of druggists' sundries and price-lists of fine chemicals, reagents, and microscopic stains. The former is comprehensive in its scope and includes a photographic section as well as a selected list of

proprietary medicines. The list at the end, of packed Dutch medicines, will appeal particularly to our South African subscribers. The scope of the chemical list is indicated above. Any chemist can obtain copies of these publications on addressing the firm.

"RASPBERRY FRUITEX" is the name which Messrs. Stevenson & Howell, Ltd., 95A Southwark Street, S.E., give to a superior preparation of raspberry for producing aerated beverages which is particularly well suited for export trade. The preparation is made from the fruit alone, and as London is one of the best markets in Europe for getting supplies of fresh fruit within twelve hours of being picked, the firm carry the fruit, so to speak, from field to flavour, under such conditions that colonial buyers have the assurance of being able to give their customers a beverage which will remind them of the fine home-grown fruit. "Raspberry Fruitex" is only one of a series of fruit-flavours for beverages which Messrs. Stevenson & Howell manufacture.

"CALOX" is the trade-mark name which Messrs. McKesson & Robbins, manufacturing chemists, New York, U.S.A., have given to a new dentifrice. We briefly referred to it in our Winter Issue, and since then we have had an opportunity of giving it a thorough trial. The manufacturers call it "the perfect dentifrice," and in this they are justified. It is an impalpable white powder of an agreeable odour, possessing not only strong antiseptic but deodorising and oxidising properties, as the result of which the teeth, after a few days' use of the powder, acquire a pearly whiteness. "Calox" is put up in handsome metal bottle-shaped containers with a hinged top, which permits just a little to be put upon the tooth-brush. It retails at 1s. per tin, and we think it is destined to become a favourite dentifrice.

MARTINDALE NOVELTIES.—The firm of W. Martindale, 10 New Cavendish Street, W., now hold stock of well-finished metric dispensing bottles, both white and amber, and hexagonal for liniments, etc., in the following sizes: 10, 20, 25, 50, 100, 125, 200, 250, 500, and 1,000 gram. These have not been easy to get in this country, and dispensing chemists who have to meet metric prescribing, or who wish to encourage it, will find them very convenient. The March list also bristles with new points in materia medica. We find quoted eusemin (a new anæsthetic), griserin (a preparation after the nature of loretin), phytin (a cereal compound in capsules and tablets), the perborates of zinc and sodium, and curasol socks. A feature is made of a representative stock of Indian and Colonial drugs, so that orders for the addendum drugs can be at once filled from stock.

LOCK-AND-KEY POISON-BOTTLE.—Messrs. T. Christy & Co., Old Swan Lane, E.C., are introducing to the trade a line in carbolic acid packed in a blue-ribbed poison-bottle, the stopper of which is in the form shown in the illustration, so that when closed it is locked, and can only be opened with the key attached to each bottle. Twelve ounces of carbolic acid in one of these bottles, and enclosed in a carton, is sold to retailers at the rate of 9s. a dozen, the P.A.T.A. selling-price being 1s. per bottle. The bottles alone, with the lock neatly finished in nickel, are also 9s. per dozen. This lock-and-key bottle is not exactly a novelty, for we figured and described it fully two years ago, but now that Messrs. Christy have taken it up we expect that it will be more heard of. The firm have also just taken up the agency for Ricksecker's perfumes.



PETER MOELLER, the old-established firm of cod-liver oil manufacturers of Christiania and London, has recently been converted into a private company, and will continue business as Peter Moeller, Ltd., Mr. Pere Moystad being the chairman of the company. The business was established by the late Peter Moeller, a pharmacist, in 1853, when he introduced the pale, non-freezable cod-liver oil prepared by the steam process. In the first year of his trading in this the output was twenty barrels, a remarkable contrast to the thousands of barrels now produced annually in Norway. Mr. Moeller

did not patent his process, but taught others how to make the pale oil, and he certainly served his country well by this magnanimity. After his death his son, Dr. Peckel Moeller, continued the business, and his recent demise has brought about the rearrangement whereby Mrs. Peckel Moeller will retain an interest in the business. Mr. Aagaard remains manager of the London branch.

Coming Events.

Notices for insertion under this heading should be received by Editor on Wednesday of each week.

Saturday, March 11.

Inter-Pharmacy Football League Matches. Westminster v. London College. Muter's v. Metropolitan College.

Monday, March 13.

Chemists' Exhibition opens at Covent Garden Theatre and remains open till Friday night.

Tuesday, March 14.

Pharmaceutical Society of Great Britain, 17 Bloomsbury Square, W.C., at 8 P.M. Evening meeting. Mr. J. Stuart Hills on "An Investigation of Linum Catharticum," and Messrs. E. H. Farr and Robert Wright, "Notes on Standardised Powdered Aleoholic Extracts—Extract of Belladonna Leaves."

Hartlepool's Chemists' Association, Grand Hotel, at 8.30 P.M. Discussion on the Pharmacy Bill.

Oxford Chemists' Association, Golden Cross Hotel, at 8 P.M. Monthly meeting.

Leicester Chemists' Association, Wain's Café, Market Place, at 8.30 P.M. Discussion as to the advisability of closing on Thursdays at 2 P.M. for the remainder of the day.

Wednesday, March 15.

Western Chemists' Association, Norfolk Hotel, London Street, W., at 9 P.M. Mr. Peter MacEwan will read a paper entitled "Are British Pharmacists Decadent?"

Royal Microscopical Society, 20 Hanover Square, W., at 8 P.M. Mr. J. E. Stead will give "A Review of Work done by Metallographers."

Manchester Pharmaceutical Association, Botanical Lecture Theatre, Victoria University. Professor Weiss will give a limelight lecture entitled "Across Canada."

Chemical Society, Burlington House, W., at 5.30 P.M. Among the papers to be communicated are the following: "The Velocity of Oxime Formation in certain Ketones," by Mr. A. W. Stewart; "Catechin and Acacatechin, supplementary note," by Mr. A. G. Perkin; "Simple Method for the estimation of Acetyl Groups," by Messrs. J. J. Sudborough and W. Thomas; and "Gynocardin, a New Cyanogenetic Glucoside," by Dr. F. B. Power and Mr. F. H. Lees.

Thursday, March 16.

Pharmaceutical Society of Great Britain, North British Branch, 36 York Place, Edinburgh, at 8.30 P.M. Evening meeting. Mr. W. Duncan on "The Solubility of Quinine in Ammonia and the Testing of Sulphate of Quinine." Mr. D. B. Dott "Note on the Hydrochlorides of Diacetylmorphine and Ethylmorphine."

Leeds Chemists' Association. Whist drive.

London Chemists' Assistants' Association, 75 Newman Street, Oxford Street, W., at 9 P.M. Mr. C. E. Male on "Matter."

Friday, March 17.

Edinburgh Chemists' Assistants' and Apprentices' Association, Imperial Hotel. Annual supper.

Bournemouth Pharmaceutical Association, Albert Restaurant, at 8.30 P.M. Mr. Stewart Hardwick will give "Notes on some Pharmacopoeial Processes."

THE FELLOWS OF THE CHEMICAL SOCIETY have arranged to dine together at the Hôtel Métropole on March 29 (the day fixed for the annual general meeting). Tickets, one guinea each, may be had from the Assistant Secretary of the Chemical Society, Burlington House, W.

INTER-PHARMACY FOOTBALL LEAGUE.—The third annual smoking-concert is to be held in the Crown Room of the Holborn Restaurant on March 23, Mr. Henry Wootton in the chair. Tickets, 1s. each, may be had from Mr. A. Kirkland (Hon. Secretary), 323 Clapham Road, S.W.

THE SECOND ANNUAL DINNER of the North Kent Chemists' Association is to be held at the Clarendon Royal Hotel, Gravesend, on April 5. The President of the Pharmaceutical Society (Mr. R. A. Robinson) will be present. Tickets can be had from Mr. R. Feaver Clarke, 21 High Street, Gravesend.

German Pharmacy.

NEW GERMAN MEDICINE-TARIFF.—From April 1 the price of a prescription will be the same wherever it may be made up throughout the German Empire. On that date the new "Deutsche Arzneitaxe" (German medicine-tariff) will enter into force. With it the existing seven different tariffs in Prussia, Bavaria, Saxony, Wurtemberg, Alsace-Lorraine, Hesse, and Mecklenburg-Schwerin (the States not mentioned have for some time already adopted the Prussian tariff) will be replaced by a uniform Imperial tariff. Up to the present almost nothing has transpired as to what changes it will bring about, for it has not yet been placed in the booksellers' hands. It is, however, stated that a special tax is provided for night-work.

AN UNFORESEEN OPEN DOOR.—In the "Pharmaceutische Zeitung" of March 4 there is the following complaint sent in from the Mark:

For some time past English firms are doing business at high-pressure here in patent medicines; they flood local railway-men, inhabitants, business-men, and retired persons, etc., with leaflets and recommendations. I do not know how they obtain the people's addresses. Kinlow's plaster at 3.50 mk., to lay on the soles of the feet, effective against all ailments; Choza for drunkenness; rheumatism-tea (contains senna, ginger, liquorice, sarsaparilla, mallow, etc.), a kilogram 5 mk. The advertisements say: "Not to be had in small places, as the single ingredients have to be obtained from India, Egypt, South America, etc., which is, apparently, only possible for the English firm to accomplish. The poor people do it in this way: Four or six club together, and one of them makes the order and divides it among the others. Before the law regulating the sale of patent medicines [in Germany] was passed, Richter's and Lück's specialities were advertised in the papers and sold by the Apotheken. Now, however, instead of these harmless patents, English ones are sent direct to the public without the agency of the pharmacist. The patent-medicine law has consequently proved itself prejudicial to the German makers of specialities and the Apotheke; it has brought about that German money is spent abroad for uncontrollable medicaments. The prescription business is getting worse and worse.

The last sentence is the main grievance, for the more the people purchase specialities the less prescriptions (the only real paying part of pharmacy in Germany) are there to make up, and it is this "diminution of prescriptions" that is a source of alarm to the German apotheker.

GERMAN RAILWAY FACILITIES TO CHEMISTS.—To enable the inhabitants of villages and places without a pharmacy to obtain their supply of drugs and the making up of their prescriptions with the utmost despatch from the nearest situated apotheker, the General-Direction of the State Railways in Prussia and Hessen has now arranged special facilities. Upon application, an apotheker may send medicaments by rail to any station within twenty-five kilometres (15 miles) of his apotheker, providing that place has no pharmacy, under the following conditions: The articles must be packed in properly constructed boxes and addressed, the weight not to exceed 10 kilograms. The boxes may be delivered any time up to the departure of any passenger-train (or goods-train) stopping at that place. The box must be fetched by the receiver at its destination, without the latter being informed of its arrival by the railway officials. The empty boxes will be sent back to the pharmacist's railway station, who must also fetch them from the station without special intimation of their arrival. If the addressee of a box does not claim it within forty-eight hours it will be sent back to the station of the sender. A box not claimed within twenty-four hours will be charged the usual cloak-room fee. The charge to the apotheker for one calendar month is 3 mk., this covering the sending of all boxes between two stations and their return when empty. In case of delay or damage, up to 3 mk. will be refunded for each box.

A. & F. PEARS, LTD.—At a meeting of the directors, held on March 8, it was resolved to declare the following interim dividends for the six months ended December 31, 1904: On the preference shares at the rate of 6 per cent. per annum, on the ordinary shares at the rate of 8 per cent. per annum. The transfer books of the above shares will be closed from March 17 to 31, inclusive, for the purpose of preparing the dividend warrants.

Medical Gleanings.

MILLER'S THYMOL DENTIFRICE-WATER.

Thymol	...	...	...	gr. v.
Benzoic acid	...	...	...	gr. XLV.
Tincture of eucalyptus	...	...	...	3iv.
Alcohol (90-per-cent.)	...	...	...	3iv.
Oil of peppermint	...	...	...	mx.

—Pharm. Zeitung.

URANIUM SALTS IN CANCER.

URANIUM SALICYLATE, in doses of 5 grains gradually increased to 20 grains, has been tried in cancer of the breast by Dr. A. C. Wilson, of Formby. After eight months' treatment there is improvement, both in the local condition and the general health. Dr. Wilson finds that the salicylate is better tolerated than the nitrate or acetate of uranium ("Lancet," 1905, 387).

LEPROLIN.

THE method of preparing this remedy for leprosy devised by Captain E. R. Rost, I.M.S., of Rangoon, was described in the "British Medical Journal" of February 11. The author's difficulty was in obtaining a medium in which the bacillus of leprosy would grow. He found in the course of his work that it is the presence of salt in nutrient media which inhibits the growth of this bacillus as well as that of tuberculosis, and he describes his experiments to get rid of the objectionable ingredient. Distilled beef-tea is practically what he arrived at, and in this he grew the bacillus for six weeks, sterilised the culture, filtered it through Pasteur candles, concentrated the filtrate to a tenth of its bulk (with due precautions), and filtered again. This final filtrate is called "leprolin." Its actions and uses are described. Substantially the first result of an injection of leprolin is the same as that of tuberculin: the temperature rises, the anæsthetic areas of the patient become red, hot, and swollen, and pulse and respiration increase. Gradually the patient recovers the feeling in the anæsthetic parts; colour returns to the white patches, ulcers heal, and even gangrenous portions slough off and assume a healthy surface. Four cases of this foul disease have been cured and others show improvement, although the treatment is still in its initial stages. The observation that the bacillus of leprosy does not grow in salt media is antagonistic to Mr. Jonathan Hutchinson's theory that leprosy arises from eating salt fish, and to this subject Captain Rost devotes a few remarks.

EUCALYPTUS OIL IN THE TREATMENT OF TYPHOID.

In a paper recently read by Dr. Cuthbert Hall, Parramatta, before the New South Wales Branch of the British Medical Association, the author said the drug which is likely to be most effectual in the treatment of typhoid fever must possess the power of reducing the temperature, of acting as an antiseptic, and of producing a tonic effect on the heart and system generally. These indications are fulfilled to a marked degree by eucalyptus oil. Eucalyptol, when pure, has little bactericidal power. Piperitone and terpenes have a much more powerful action, while if the oil is to have a particularly powerful bactericidal effect it must have a sufficiency of ozone, derived from oxidation of the terpenes. If one is not sure that the brand of oil he is using contains much ozone, this may be made up for by prescribing a little peroxide of hydrogen along with the oil. The oil which Dr. Hall employed most was that of *Eucalyptus Smithii*, which consists mainly of pinene, and this was ozonised by exposing it to the action of light and air for a month before use. The antiseptic effect was seen in the altered appearance and diminished fever. For adults he employed 10-minim doses suspended in mucilage and given every four hours. Larger doses could be tolerated, but care must then be taken lest acute nephritis be set up by the terpene constituents of the oil. The reduction in temperature is surprising. This is mainly due to the gentle perspiration into which the patient almost invariably breaks, and which may continue for more than an hour or two. This effect is not mentioned in the text-books. In very large doses eucalyptus oil acts as a profound depressant to the central nervous system. In his cases Dr. Hall found a marked absence of delirium, mainly attributable to a reduction of the temperature, but probably also due partly to a sedative effect on the central nervous system.

College Notes.

LEEDS COLLEGE OF PHARMACY.—On Tuesday, March 7, the students of this College had their annual excursion to Collingham Bridge. Leaving the College at 10 A.M., car was taken to Roundhay, the remaining seven miles being accomplished on foot. On arrival pancakes were served and perfect justice was done to these. A football match followed between two of the College classes, honours being divided. At 5.30 tea was provided, after which a whist-drive and impromptu smoking-concert brought a very enjoyable day to an end.

WEST OF SCOTLAND COLLEGE OF PHARMACY.—On March 4 the students of this College, accompanied by the Principal (Mr. T. S. Barrie, F.C.S.), had a very successful botanical ramble to Erskine Ferry. Leaving Glasgow at 10.35 A.M. for Renfrew, the students first searched the banks of the Cart for some distance, where "Water Dropwort" was found abundantly, thence by road to Erskine (investigating the woods by the way), where tea was served. The route home was across the Ferry and back to town by train. Few flowers were found.

GLASGOW SCHOOL OF PHARMACY.—The annual smoking concert of the past and present students of this school was held in the Bank Restaurant, Queen Street, Glasgow, on March 1. Mr. J. Lothian, Principal of the School, presiding. The company numbered about seventy. Mr. W. L. Currie, President of the West of Scotland Pharmaceutical Association, was unable to be present, owing to his official duties in London. The Chairman opened the proceedings by proposing the health of "The King." Thereafter a lengthy entertainment programme was gone through, which lasted till midnight. Among those who took part were: Messrs. Lothian, McLeod, Dickson, Newall, Hannah, and Farries (songs), Gilmour, Pfeiffer, and Cairncross (readings). The secretarial work was carried out by Mr. P. Fenton, who was supported by an excellent committee. After a vote of thanks to the Chairman an enjoyable reunion was brought to a close by the singing of "Auld Lang Syne."

INTER-PHARMACY FOOTBALL LEAGUE.—The position of teams up to March 4 was as follows:

	Played	Won	Lost	Dn.	For	Points	
						Goals conceded by	Total
London	6	5	0	1	22	5	13
Square	6	3	2	1	14	10	11
Metros.	7	3	4	0	19	19	8
W'minster	6	2	4	0	8	16	6
Muter's	3	0	3	0	4	17	0

The last match of the season will be played on Saturday, March 11, between Westminster and London College. The League cup and medals will be presented to the winning team at the annual smoking-concert, to be held at the Holborn Restaurant (Crown Room) on March 23. The "runners up" will also receive medals, provided this season by Mr. Henry Wootton. At the match between London College and the Square, played at Shepherd's Bush on March 4, a fast game resulted in a win for London by 3 goals to 1.

WHERE TO STUDY.

THE FOLLOWING EDUCATIONAL INSTITUTIONS are advertising in this issue:

South London School of Pharmacy, 325 Kennington Road, S.E.

Metropolitan College of Pharmacy, 160 and 162 Kennington Park Road, S.E.

London College of Chemistry, 323 Clapham Road, S.W.

Burlington Correspondence College, 8 Crescent Grove, Clapham Common, S.W.

Manchester College, 225A and 227A Oxford Road, Manchester.

Northern College of Pharmacy, 100 and 102 Burlington Street, Manchester.

Leeds College of Pharmacy, Clarendon Road, Leeds.

DAVID THOM, DOMERIEU & CO., LTD.—A petition by Mr. Albert Fryers, the liquidator of the company, for the sanction to a scheme for the reduction of its capital, came on for hearing at the Manchester Court of Chancery on Monday, March 6. The company was incorporated on February 4, 1898, with a capital of 180,000l., in 18,000 preference shares of 5l. each and 18,000 ordinary shares of 5l. each, and 16,000 of each had been issued and fully paid up. On October 28, 1904, it was resolved that the company should be wound up; and on November 18, 1904, it was resolved to form a new company with a capital of 85,000l., divided into 64,000 preference shares of 1l. each and 21,000 ordinary shares of 1l. each; and by an order dated December 21, 1904, special meetings were held, and resolutions were passed approving of the scheme. The Vice-Chancellor sanctioned the scheme.

Trade Report.

NOTICE TO BUYERS.—The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers stock the goods. Qualities of drugs and oils vary greatly, and higher prices are commanded by selected qualities even in bulk quantities. It would be unreasonable for retail buyers to expect to get small quantities at anything like the prices here quoted.

42 Cannon Street, London, E.C., March 9.

THE better tone noticed last week has not been maintained, there being more complaints than usual of slack business. This month is, of course, likely to be a particularly trying one to a certain section in the "Lane," as the shellac tenders for March are heavy, and the knowledge of this fact has a reflex action upon other speculative articles. Peppermint oil is flat, but menthol is inclined to be firmer. Quinine has been depressed for speculative purposes, but apart from this the general tone is quiet and easier. Bismuth and salts have been unexpectedly reduced, to the annoyance of makers and dealers. Tartaric acid is firmer. Norwegian cod-liver oil has fluctuated, but closes dearer; demand is fairly good. Senega is firmer, and cascara is steady. Camphor is firm, but quiet. Hydrastine is higher. True almond oil is lower and elove oil is easier. Vanilla at auction was mostly bought in, and where business was effected prices showed a decline. The Bank-rate was reduced to-day to 2½ per cent., having been 3 per cent. since April 21, 1904. The following table shows the principal alterations of the week:

Higher	Firmer	Easier	Lower
Acid, tartaric Cocoa butter Hydrastine Oil, lemon	Senega Serpentary	Benzols Oil, castor Oil, pepper- mint Quinine (sec. hands)	Bismuth and salts Oil, almond (B.P.) Pepper (white) Vanilla Opium

Cablegrams.

HAMBURG, March 9:—Japanese wax is dull and lower at 87m. per 100 kilos. Citric acid is firmer, and elemi is also firmer at 87½m. per 100 kilos.

SMYRNA, March 9:—The sales of opium for the week ending Wednesday (including those referred to in our Smyrna correspondent's letter) amount to 300 cases, principally for American account, at from 7s. 6d. to 8s. per lb., according to quality.

NEW YORK, March 9:—An active tone has prevailed in the drug-market. An easier feeling is evident in opium, which is now offered at \$2.98 per lb. for druggists' in case lots. Cod-liver oil is depressed, and \$35 per barrel will now buy Norwegian. Peppermint oil is nominal at \$3.10 per lb. in bulk. Menthol is inactive at \$2.25 per lb. Ergot is slow of sale at 36c. per lb., and citronella oil is easier at 35c. per lb. Round buchu leaves are firmer at 16c. per lb.

BERGEN, March 8, 6.30 p.m.:—The total catch of cod for the whole of Norway now amounts to 3,405,000, against 7,234,000 at the corresponding date of last year. This has yielded 2,606 barrels of oil, which compares with 2,785 barrels at the same date of 1904. The fishing taken as a whole is rather poor, and East of Lofoten (to where the cod should now be migrating if a good result is to be assured) the fishing is still bad. The livers remain good, although a little leaner, and the market has advanced to 120s. per barrel f.o.b. for finest non-congealing Lofoten oil, this price being 10s. better than last week.

Arrivals.

The following drugs, chemicals, etc., have arrived at the principal ports of the United Kingdom from March 2 to 8, inclusive: Acetanilide, 20 pkgs.; acetone, 55 dms.; acid, acetic, (@ Fredrikstad) 180 pkgs., (@ Terneuzen) 70 chys. 20 brls.; acid, boric (@ Leghorn), 20; aloes (@ Mossel Bay), 10; alum, 30; aniseed (@ Konigsberg), 81; annatto (@ Madras), 4; argol (@ Cape Town), 27; balsam copaiba, 5 cs.; benzoïn (@ Singapore), 30 cs.; bleaching powder, 429; borax, (@ Arica) 662, (@ Antofagasta) 683; buchu (@ Cape Town), 11; Calabar beans (@ W.C. Africa), 41; calcium carbide, (@ Norway) 675, (@ Fredrikstad) 437 drs., (@ Treport) 950; camphor (@ Havre), 420 cs.; canary-seed (@ Buenos Ayres), 2,451; cardamoms, (@ Ceylon) 174, (@ Calicut) 79; chamomiles, 5; cinchona, (@ Amsterdam) 11 cs., (@ Guayaquil) 128 bls., (@ Paita) 28, (@ Mollendo) 31, (@ Valparaiso) 28; citrato of lime (@ Messina), 19; cloves (@ Hamburg), 837; colocynth (@ Marseilles), 18; cream of tartar, (@ Rotterdam) 14, (@ Bordeaux) 257; cumin-seed (@ Saffi), 32; dill seed (@ Bombay), 60; dragon's-blood, (@ Penang) 4 cs., (@ Singapore) 2 cs.; drugs (@ Yokohama), 31 cs.; gentian, 10; ginger (@ W.C. Africa), 200; gum, Senegal (@ Bordeaux), 100; iodine (@ Valparaiso), 10 kegs 45 brls.; ipecacuanha (@ Monte Video), 14; kola (@ W.C. Africa), 23; menthol, (@ Havre) 19 cs., (@ Yokohama) 15 cs. *in tr.*; musk (@ Colombo), 1 box; oils, essential, (@ Messina) 196, (@ Hamburg) 5; oil, castor (@ Calcutta) 425 cs.; oil, citronella (@ Galle), 12; oil, cod-liver, (@ St. John's Newfoundland) 200 cks. 64 brls., (@ Christiania) 12 cs., (@ Aalesund) 150 brls., (@ Bergen) 12; oil, eucalyptus (@ Hamburg), 61; oil, juniper (@ Hamburg), 3 cs.; oil, peppermint (@ Havre), 139 cs.; orange peel (@ Marseilles), 18; pot. carb. (@ Hamburg), 38; pot. chlor. (@ Treport), 51; quicksilver (@ Seville), 5,000 flks.; quillaia (@ Talcahuano), 399; roots (@ Marseilles), 108; sal ammoniac, 26; sandalwood, (@ Mangalore) 178 brls. *in tr.*, (@ Calicut) 148 *in tr.*; sandarac (@ Mogador), 45; senna, (@ Tuticorin) 12, 148 *in tr.*; soda crystals (@ Ghent), 1,250; sticklac (@ Havre), 174 cs.; thorium nitrate (@ Bremen), 8; turmeric, (@ Calcutta) 62, (@ Cochin) 80; wax, bees', (@ Rangoon) 11 cs., (@ Mogador) 18, (@ Calcutta) 15, (@ W.C. Africa) 6; wax, carnauba (@ Hamburg), 11; wax, Japanese (@ Hamburg), 24.

Heavy Chemicals.

In spite of the fact that there is a fairly moderate demand at all the principal centres of the heavy chemical market business can hardly be described as other than being on the quiet side. Home trade is not so bad, but exports are certainly low. However, there seem to be more inquiries in the market for forward delivery, and it would appear that an improvement, if only a gradual one, is imminent. Values all round are on the firm side, and are likely to continue thus.

ALKALI PRODUCE.—With the exception of bleaching powder, which is rather dull, main products are in an average request, the home consuming trades being fairly well employed.

SULPHATE OF AMMONIA continues very flat, and with very little new business of moment being done quotations are only of a nominal character. Nearest values are: Beekton 13l. 7s. 6d., Beekton terms 13l. to 13l. 2s. 6d., London 13l. 2s. 6d. to 13l. 5s., Leith 13l. to 13l. 2s. 6d., and Hull 13l.

BENZOLS are quiet, and values are lower, with a tendency towards further decline rather than otherwise. 90-per-cent. 9½d. to 9¾d., and 50-per-cent. 7½d. to 8d. per gal. Aniline oil and salts are in better request and firmer, the former at about 5½d. per lb. and the latter at 5d. per lb.

ZINC SALTS are in fairly active demand, and are steadily maintained in value. Zinc sulphate crystals 6l. to 6l. 5s. per ton, and zinc chloride solution, 100° Tw., 6l. 5s. to 6l. 10s. per ton.

BICHROMATES OF POTASH AND SODA continue steady at unchanged figures. Bichromate of potash, English and Scotch deliveries, 3d. per lb., less 2½ per cent. Glasgow, and export 2¾d. per lb. net, f.o.b. Glasgow. Bichromate of soda, English and Scotch deliveries, 2¾d. per lb., less 2½ per cent. Glasgow, and export 2d. per lb. net, f.o.b. Glasgow.

Liverpool Drug-market.

Liverpool, March 8.

ANISEED.—Russian is firmly held at 20s. to 20s. 6d. per cwt. less 1¼ per cent. gross weights.

QUILLAILA BARK.—There is rather more inquiry, but buyers and sellers are too far apart in their views to enable business. It is held firmly at 17l. 15s. to 18l. per ton.

BEESWAX.—Chilian is in small compass with steady sales at 7l. 7s. 6d. to 8l. per cwt., according to quality.

COD-LIVER OIL (Newfoundland).—In view of the lower prices for Norwegian and the more favourable reports there is very little inquiry, holders being too high in their ideas to enable business. Stocks are still very large.

CASTOR OIL.—Good seconds Calcutta is in good demand with sales at 2¾d. to 2½d. per lb. For shipment 2½d. is still

wanted, and no buyers at the price. First pressure French is unchanged at 23 $\frac{1}{2}$ d. on the spot, and for shipment 23 $\frac{1}{2}$ l. 15s. to 24 $\frac{1}{2}$ l. 5s. per ton f.o.b. Marseilles.

ACID, TARTARIC.—Agents are very firm at 10 $\frac{1}{2}$ d. per lb. c.i.f. for foreign.

ACID, CITRIC.—It is very difficult to get offers, 1s. 2d. per lb. being sellers' idea.

CARNAUBA WAX.—Reports to hand confirm the previous advice that this year's crop is likely to be very small. At present holders are very firm at 147s. 6d. per cwt. for grey, and 160s. to 170s. for yellow.

German Drug-market.

Hamburg, March 7.

Business is quiet and our drug-market does not show much animation at present.

ANTIMONY is tending firmer at 36m. per 100 kilos.

ALOES (Cape) is quiet at 53m. per 100 kilos.

CAMPOR.—Refined is firm with an improving demand; to-day's quotation is 700m. per 100 kilos.

CANTHARIDES are very firm at 10m. per kilo.

CASCARA SAGRADA is quiet at 62m. to 60m. per 100 kilos.

CARNAUBA WAX continues firm at from 275m. to 340m. per 100 kilos, according to quality.

ERGOT is unchanged at 35m. per 100 kilos.

GOLDENSEAL is firm at 16 $\frac{1}{2}$ m. per kilo.

ELEMI is scarce and firmer at 80m. per 100 kilos.

ACCROIDES is lower at 44m. per 100 kilos. for yellow.

IPECACUANHA is quiet at 11 $\frac{1}{2}$ m. for Cartagena, and 11 $\frac{1}{2}$ m. per kilo. for Rio.

LYCOPodium is strong at 75m. to 800m. per 100 kilos.

MENTHOL is quiet at 15 $\frac{1}{2}$ m. to 15m. per kilo.

KOLA is unchanged at from 75m. to 80m. per 100 kilos.

RHATANY is quiet at 60m. per 100 kilos.

SENEGA is also quiet at 64m. per 100 kilos, spot.

SPERMACETI is firm at 230m. per 100 kilos.

SUGAR OF MILK is very firm at 120m. per 100 kilos.

CITRIC-ACID is also very firm at 240m. per 100 kilos.

OILS (FIXED).—Castor is quiet at 48m. per 100 kilos. for first pressing in barrels, and forward 49m. Cod-liver is quiet, non-congealing oil being quoted 135m. per barrel. Rape oil is very firm at 49 $\frac{1}{2}$ m. to 50m. per 100 kilos. for German oil, free from duty. Chinese wood is firmer at 52m. per 100 kilos.

OILS (ESSENTIAL).—Star anise is quieter at 11m. per kilo. Peppermint is dull of sale, American H.G.H. offering at 15 $\frac{1}{2}$ m. per lb. Japanese is flat and easier at 10m. to 9 $\frac{1}{2}$ m. per kilo. Camphor oil is scarce at 88m. per 100 kilos.

American Drug-market.

New York, February 28.

Business generally is fairly good and the demand for drugs of average volume. The bromide situation continues to be the feature of the market.

BUCHU-LEAVES are rather firmer, with prime green quoted at 18c. to 20c. Yellow are offered down to 16c.

COCAINE is quoted at \$3.75, but most dealers will sell at the old figure of \$3.50.

COD-LIVER OIL is dull and demand poor. Quotations for prime Norwegian have declined to \$42.00.

CITRONELLA OIL continues firm, but holders are more inclined to sell. Bulk is offered at 37c., but some dealers ask as high as 40c. and are holding off in anticipation of better figures.

IODINE advanced sharply in sympathy with conditions abroad, and \$4.15 is now quoted. Iodides are higher in sympathy, potassium iodide being advanced to \$3.15.

IPECACUANHA.—Rio is quiet at \$1.25, but Cartagena is held at \$1.30.

LYCOPodium is firmly held at 90c., but demand has fallen off.

MENTHOL.—Considerable lots have changed hands at \$2.25 and in some quarters \$2.20 would be accepted for future delivery. Most holders have paid considerably higher prices and refuse to sell below \$2.50.

OPIMUM is firm, with cases held at \$3.00.

QUININE is unchanged on a basis of 23c., but higher values are looked for after the next bark sale.

SARSAPARILLA.—Mexican is firmer, with 9 $\frac{1}{2}$ c. asked.

SERPENTARY has advanced to 40c.

SENEGA.—Supplies of Western are plentiful and the market is weakening. While 62c. is the open quotation, less would buy.

PEPPERMINT OIL is unsettled, with \$3.20 a nominal quotation. Supplies could probably be obtained at \$3.00, but buyers will not pay this figure. A bid of \$2.75 was declined by a large holder.

Sicilian Sulphur.

An advice from Messina dated February 28 states that in the Italian Parliament the Sicilian Deputies questioned the Minister regarding what steps he meant to take to protect the

Sicilian sulphur industry against American competition. The Minister deferred answering, his agents not having been able to obtain positive information regarding the production of the Louisiana mines. The January exports from Sicily meanwhile show an increased business to the United States, being 8,069 tons against 3,222 tons in December. Doubts are beginning to rise as to the potentiality of the Louisiana mines, which fact has tended to strengthen the Sicilian markets, and the monopoly again slightly increased their quotations, which shippers have had to pay. The arrivals from outsiders have almost ceased, owing to the prohibition of fusing the ore while the cereal crops are on the field. At Catania all the refineries and mills are in full work, as the usual spring demand has set in. Negotiations for the renewal of the contract with the monopoly are being actively pursued, but the adhesion of only about 40 per cent. has so far been obtained. The total exports during January were 38,079 tons, against 39,455 tons in the preceding year. The total stock in Sicily at the end of January was 378,195 tons, against 362,205 tons in 1904.

German Bromides in U.S.A.

Our New York correspondent writes on February 21 that since the invasion of this market by the German Bromine Syndicate, with the consequent cut in prices of bromides, the largest American seller has dropped quotations to a parity with the German figure. Both sides, however, refuse orders at quoted figures, and it is doubtful if a pound of bromide has changed hands at the reduced prices. The jobbing trade continues to invoice at the old figure. It is reported that the Germans are trying to secure a factory in this country, but it is doubtful if they will be successful. The American product is now manufactured by one firm in Michigan, who have an arrangement with two large chemical houses to market their output. This concern controls most of the natural supply of bromide. Present indications are that the fight will be a long one unless some compromise can be effected. It is obvious that if the Germans sell any quantity of bromides at present quotations most will find its way back to Europe and serve to break their market there, the American firms thus holding the best cards in the game. Potassium bromide is quoted at 15c., sodium at 17c., and ammonium bromide at 22c. per lb.

Tibetan Musk.

Our Bombay correspondent writes that both the native States of Kashmir and Chamba have passed measures prohibiting the killing of musk deer. The bulk of the trade in this article passes through these states into India *via* Ladakh. Some concern has been expressed by those who handle the product that the demand will outrun the supply.

ACETONE.—A German report states that the position of the crude material market is such that there is little prospect of cheaper prices for the whole of this year. Even if the demand for the production of smokeless powder should fall off, it will probably be a long time before manufacturers will accrue stocks again. At present they are using all their endeavours to satisfy the demand. The current prices are from 145m. to 155m. per 100 kilos.

ACID, CITRIC.—Very firm. The makers have done a good business at 1s. 2 $\frac{1}{2}$ d. per lb. for English, and are loath to go on at the price. Foreign is 1s. 2d. Raw materials, such as lemons, have advanced considerably of late.

ACID, TARTARIC, has advanced to 11 $\frac{1}{2}$ d. per lb. for English, and to 10 $\frac{1}{2}$ d. to 11d. for foreign. There is more demand than has been the case for some time past.

ALOES.—Sales of the parcel of Curaçao ex last week's auction have been made at 22s. 6d. per cwt. for middling coarse brown liver.

ANISEED.—Sellers on the spot ask 22s. for Russian, but for shipment 24s. c.i.f. is quoted.

ARROWROOT.—About steady. At auction 454 barrels St. Vincent sold at from 1 $\frac{1}{2}$ d. to 1 $\frac{3}{4}$ d. per lb. for fair to good manufacturing, and privately the sales include 600 barrels at 1 $\frac{3}{4}$ d.

BALSAM PERU is quoted 4s. 6d. per lb., and probably a shade less for quantity.

BELLADONNA.—English root is quoted 50s. per cwt. net.

BISMUTH.—The bismuth convention announced a decline of 1s. per lb. in the price of the metal on Tuesday, and now quote 9s. per lb. The makers of bismuth preparations

have accordingly reduced their prices and the following are now current :

	List Price and below 1 cwt.	1 cwt.		2 cwt.	
		s. d.	s. d.	s. d.	s. d.
Bismuth benzoate	11 6	11 5	11 4		
" carbonate	9 9	9 8	9 7		
" citrate	8 9	8 8	8 7		
" nitrate cryst	5 4	5 3	5 2		
" oxid., p.b.	12 4	12 3	12 2		
" salicylic	8 9	8 8	8 7		
" phys pur.	11 6	11 5	11 4		
" subchlor.	9 6	9 5	9 4		
" subnit.	9 1	9 0	8 11		
" levig.	9 7	9 6	9 5		
" tannate	9 3	9 2	9 1		

Further details will be found on our editorial page.

CAMPHOR.—There is a small inquiry, and the market is firm at from 3s. 4d. to 3s. 6d. per lb. for English bells from refiners.

CARDAMOMS.—Reports are current that the future of this article is brighter than it has been for many months past, partly owing to the fact that the shipments from Ceylon so far this year show a substantial decrease and that India has been purchasing heavily. Since the auctions fair quantities have changed hands at the advance paid last week.

CASCARA SAGRADA.—The firmer tone noted last week is maintained, holders asking 30s. per cwt. for two-year-old bark. Good matured bark is well maintained.

CINCHONA.—The auction to be held on March 30 at Amsterdam will consist of 276 cases and 1,541 bales Succirubra, and 5,205 bales Ledgeriana and hybrid bark, making a total of 7,022 packages.

COCOA BUTTER.—In auction 70 tons of *Cadbury's A* brand sold at from 1s. 0½d. to 1s. 0¾d. per lb., closing at 1s. 0½d., being ¾d. per lb. dearer. At Amsterdam on March 7, 70 tons Van Houten's sold at 66¾c. to 68¼c. (average price 67.75c. against 65.85c. at the previous auction). Fourteen tons De Jong were offered, of which 3,850 kilos. sold at 63¾c. to 64c., and of Mignon 13 tons were offered, of which 3,540 kilos. sold at 63c.

CUMIN-SEED.—Mogador is quoted 22s. to 22s. 6d. per cwt.

DANDELION.—English is quoted 33s. and cut 43s. per cwt., net.

GUM ARABIC.—At auction 150 bales Soudan sorts offered, of which 25 sold at 21s. for fair hard. Sixteen bags Australian sold at 23s. for good red, 18s. for fair, and 17s. for dark. Good palish small Aden was bought in at 30s. per cwt.

HEXAMETHYLENTETRAMIN.—Crystals have been reduced to 2s. 7½d. per lb., net, and for tablets 4s. is quoted.

HYDRASTINE.—The extreme rates paid for golden seal have compelled makers of hydrastine to advance their prices by 6s. per oz., and they now quote from 34s. to 39s. per oz., according to quantity. Ext. hydrastin and other preparations follow the advance.

MENTHOL.—Holders are rather firmer in their ideas of price, 7s. 3d. per lb. spot being the general quotation for Kobayashi, at which a retail business has been done.

OIL, ALMOND.—English pressers have reduced their prices by 1d. per lb., and now quote 1s. 1d. for B.P. *sweet* and 1s. 3d. for bleached. *Apricot-kernel* oil is unaltered at 7½d. per lb., net, and bleached 9½d.

OIL, CASTOR.—Steady. *Hull* make for prompt delivery is quoted 24l. 2s. 6d. for firsts and 21l. 2s. 6d. for seconds, ex wharf, London. *French* medicinal is quoted in barrels on the spot at 29s. and at 31s. per cwt. in cases. *Belgian* firsts is easier at 24l. per ton for firsts and 21l. for seconds.

OIL, COD-LIVER.—Considerably more attention has been paid to this article during the week, as the lower range of

prices now quoted by agents have tempted a few buyers to stock new oil for current requirements. Many, however, are holding aloof, awaiting the outcome of the fishing. Finest new Norwegian was sold early in the week at 100s. to 105s., c.i.f., but the tone on Wednesday was rather firmer, a more current quotation being 110s., c.i.f., and even 115s. is asked by some. The tendency at the close is much better, as will be seen from our cablegram, and at the moment it is thought the present prices are not in accordance with the true position of the article. One Aalesund refiner has been offering for delivery both in England and the Continent at prices considerably below the actual figures paid for the oil in Norway, but, of course, such low prices rather frightened buyers than otherwise. This fright appears to have come about by rumours of improved fishing at Lofoten, as telegrams arrived from various fishing places stating that the weather was fine and calm on the coast, and the fishing was better. Other refiners to a certain degree followed the example set by the Aalesund refiner, who started "cutting," but, as events subsequently proved, there was nothing in the statistics of the catch to justify the drop, as it was realised that the reports were exaggerated. The market afterwards recovered to 110s., and again to 117s.

BERGEN, March 6. The official as well as the private news now arriving from Lofoten all inclines to the fact of a breaking down of the strong belief of a rich catch at Lofoten. In order to arrive at a good result it is essential that the cod should go to the east of Lofoten, so to allow the catch to embrace an extensive coast, but this evening we just received telegrams from our curers stating that the fishermen are leaving the east of Lofoten and travelling westward, which means that the hope for a good fishing in the east of Lofoten is now failing. It is, of course, too early to prognosticate, but we are afraid that all hope for a rich catch should now be laid aside. The shippers who offered for forward delivery at risky prices are now becoming somewhat alarmed, and to-day business has been done at 120s. f.o.b., which again is a rise of 3s. since Saturday, when the last price was 117s., and we have the firm belief that prices will go still higher.

A further Bergen report, dated March 2, states that advices to hand on that day continue unsatisfactory. At present it is quite impossible to foresee what the catch will be. The time lost up to date might easily be made up if the weather improved, but so far, as usual after mild winters, it has been very stormy, and it is to be feared may continue so throughout March. At Senjen and Vesteraalen, where the fishing generally starts at the beginning of February, nothing has yet been done, and at Lofoten there are only 2,500 boats, as against 6,000 to 7,000 at the beginning of March formerly, and in that important district only about 420,000 cod have been caught. On account of the continuous storms the fish have had to be left on the hooks, or in the nets, for several days, and the oil produced from the liver of such fish is hardly fit for medicinal purposes. Finest non-congealing oil is quoted 105s. per barrel, c.i.f. U.K. [This price no longer holds good.—EDITOR.]

OIL, OLIVE.—An advice from Messina, dated February 28, states that the late cold and wet weather is considered highly favourable to the olive trees, thereby killing the insects with which the trees are infested. Owing to "bears" operating largely for March 1906 a further decline in prices has been produced. The following are the quotations: Yellow Messina 34l. 5s., green Messina 33l. 10s., burning Russia 38l. 10s., Gallipoli 34l. 10s., choice Gallipoli 35l. 15s. per ton, f.o.b.

OILS, ESSENTIAL.—Liquid extract of *Male Fern* is lower at 4s. per lb. net. English *Clove* oil is quoted 2s. 9d. per lb., which price could be shaded 1d. for quantity. *Star aniseed* oil continues easy at 4s. 9d. spot, and *Cassia* oil is unaltered at from 2s. 8d. to 3s. 2d. per lb. *Citronella* oil has been sold at 1s. 4d. per lb., c.i.f. London, for shipment to end of June. *Peppermint* oil of all descriptions is flat. Immediately after the auctions last week re-sales of the cheap parcels of American HGH sold in auction were turned over at 14s. 9d. per lb., but there are sellers this week at 14s. 6d. Japanese dementholised is quoted 4s. 3d. spot for Kobayashi, and in second-hands 3s. 9d., c.i.f. *Lemon* oil is advancing, with a good demand; 2s. 4d. per lb., c.i.f., is quoted for a good brand.

OPIMUM.—The tone of the London market is flat, and prices, in sympathy with those of Smyrna (where a decline of 3d. to 6d. has taken place), are rather lower. A moderate business has been done in soft shipping Tokats

and Malatia at from 7s. 9d. per lb. upwards, and a few cases of Karahissar have also changed hands at 7s. 9d. per lb.; retail sales of Persian have also been made at 15s.

CONSTANTINOPLE, March 4.—The market is quiet, with no business passing. Our Balukissar agent advises us that the crop has suffered to the extent of 50 per cent., and it is therefore more probable that the higher districts, such as Karahissar and Koniah, not to mention Salonica, have suffered to a much larger degree. The week's sales amount to 5 cases Hadjikeuy at the equivalent of 9s. 3d. per lb., f.o.b.

SMYRNA, February 24.—There are practically no sales to report this week. The market, however, keeps steady, and the growing districts confirm the reports of a total absence of spring sowings this year owing to severe cold weather. The general opinion is that we shall not have a crop of over four thousand cases, and as soon as a demand from consumers springs up prices are likely to advance. The following are the quotations: Common mixed manufacturing (9½ to 10 per cent.) 7s. 3d. to 7s. 8d. per lb. f.o.b.; selected manufacturing (11 to 11½ per cent.) 7s. 10d. to 8s. 2d.; slightly seconds (about 10½ per cent.) 7s. 10d.; Yerli, Boghaditz, and Karahissar as to quality, strength, and buying conditions, 7s. 9d. to 9s. The arrivals in Smyrna to date amount to 4,296 cases, against 1,748 at same period last year.

SMYRNA, March 3.—We have again had a very quiet week, but this morning the Americans came forward and swept the market of all manufacturing stock, offering at an average price of 8s. per lb., f.o.b. The purchases amount to 150 cases, and in our telegram next week reporting sales we will include this. The spring sowings have not succeeded hitherto, and as only a few days now remain to sow we shall have a very small spring crop. In fact, as all the season's sowings have been unsatisfactory, it is expected that the whole Turkey crop will not exceed 4,000 cases this year. The arrivals in Smyrna to date amount to 4,339 cases, against 1,753 at same period last year.

PODOPHYLLIN RESIN is now offered at 11s. 9d. per lb. net, being lower.

QUICKSILVER is steady at 7l. 12s. 6d. per bottle. Mr. A. S. Pickering in his statistics states that the imports during February amounted to 5,092 bottles, against 622, 10,040, and 5,255 bottles in February of 1904-03-02 respectively. The imports during the two months (January-February) have also been 5,092 bottles, against 851, 10,722, and 5,784 bottles in 1904-03-02 respectively. Exports in February were 1,436 bottles, against 1,293 bottles, and for the two months the totals are 5,251 bottles, against 4,547 bottles in 1904.

QUININE.—Since our last issue sales have been made for cash at 10½d. to 10¾d. for delivery against the March tenders, which have proved heavy; and since then there are sellers at 10¾d. for good German sulphate in bulk, the tone being decidedly flat.

SENEGA.—Sales have been made for export at 2s. 9d. per lb. net, but 2s. 10d. is now the lowest spot price.

SERPENTARY.—Small sales have been made at 1s. 10d. per lb. net, at which further business could be done.

SHELLAC.—At auction on Tuesday 200 chests, slightly water-damaged by fire at Gun Wharf, sold without reserve at 88s. for low flint orange block and 102s. 6d. for low livery block. Of button 176 chests sold, including "Ralli special," at 140s., second button 145s. to 155s., and circle 2's at 120s. to 127s. 6d., weak thirds 100s. to 117s. 6d., weak fourths 95s. to 107s. 6d., low resinous blocky 52s. 6d. to 85s., very low 30s. to 49s., and very inferior 13s. to 15s. per cwt. Privately the market has been very quiet, with sales of fair TN on a basis of 147s. 6d. March delivery has been sold at 143s., and to-day 1,200 cases have been sold for delivery.

SPICES.—At auction on Wednesday only three barrels of Jamaica *Ginger* were offered; they sold at 35s. 6d. for small bright, and 31s. 6d. for mouldy. The small supplies of Calicut were bought in, including brown rough at 18s. Bengal partly sold at 17s. for small and medium rough. New crop limes Japan was bought in at 18s. No Singapore *Pepper* was offered at auction; privately fair is quoted 5½d. to 5¾d. per lb., and to arrive the market is firm and dearer, March-May shipment having been sold at 5¾d. to 5¾d. In auction *White Pepper* was bought in at 11d. for fine and 8d. for fair Singapore; the market is firm for arrival with sales of March-May at 7¾d., c.i.f., and 7¾d. landed terms. Fine Japanese *Chillies* were bought in at 40s., and good at

32s. *Pimento* quiet at from 2¾d. to 2½d., which prices were paid for 76 bags in auction. *Nutmegs* were steady, and *Mace* quiet with small sales at from 1s. 3d. to 1s. 4d. per lb. for ordinary to fair West Indian, and 1s. 2d. for red. Fourteen bags *Cassia Vera* sold without reserve at 8s. per cwt. for common wild Bombay. *Zanzibar Cloves* have been quiet throughout with small sales of March-May delivery at 4½d. to 4¼d., these prices being steady.

TURMERIC.—Small sales of Bengal have been made at from 12s. 6d. to 13s. per cwt.

VANILLA.—Practically a thousand tins were offered at auction on Wednesday, of which about one quarter sold, the tone being flat. Good to fine beans were 1s. to 1s. 6d. per lb. lower, and foxy, brown and splits 3d. to 6d. lower. The finest lots of Seychelles brought 11s. 6d. per lb. for 8 to 8½ in.

London Drug Statistics.

The following statistics are compiled from information supplied by public warehouses. They relate to the receipts and deliveries of some of the leading drugs from and into the London public warehouses for the month of February, 1905, and to the stocks on February 28.

	February		Stocks		1905	
	Landed	Delivd.	1905	1904	Imprtd.	Delivd.
Aloes.....cs, etc.	31	189	616	970	146	316
Aniseed, star.....cs.	—	—	—	6	—	—
Arrowroot.....pkgs	650	1,601	9,408	11,809	1,424	2,841
Balsams...cks, etc.	—	24	639	707	20	53
Calumba.....bgs	—	60	185	557	—	104
Camphor.....pkgs	601	728	1,138	596	1,196	1,355
Cardamoms cs, etc.	286	468	2,364	2,040	723	763
Cinchona.....pkgs	864	946	6,477	6,003	2,094	1,786
Cocculus indicus bgs	—	—	82	113	—	11
Cochineal....."	14	62	182	365	109	118
Cubeb's....."	—	3	719	1,266	—	11
Dragon's blood.....cs	23	8	40	104	23	20
Galls.....pkgs	—	—	644	3,617	90	366
Gums—						
Ammoniacum....."	1	1	5	10	1	1
Animi....."	39	97	421	313	66	122
Arabic....."	1,006	1,430	6,920	9,922	2,336	3,305
Asaetida....."	367	241	531	353	578	329
Benzoin....."	116	115	1,150	1,199	361	268
Copal....."	5,727	7,300	22,583	31,324	17,915	13,877
Damar....."	482	696	2,001	2,720	935	1,158
Galbanum....."	—	—	—	3	—	3
Gamboge....."	23	9	16	31	24	26
Guaiaecum....."	—	—	62	51	43	42
Kauri...tons, net	191	147	*939	1,122	367	298
Kino.....pkgs	—	—	86	131	—	—
Mastic....."	—	—	19	8	—	2
Myrrh, E.I....."	20	26	27	61	27	28
Olibanum....."	118	95	2,194	1,355	338	176
Sandarac....."	98	326	598	1,101	177	521
Tragacanth....."	2,859	1,897	5,206	4,384	4,519	3,327
Ipecacuanha—						
Matto Grosso....."	56	38	292	503	57	70
Minas....."	—	7	58	136	—	29
Cartagena....."	—	6	25	122	—	7
E. I....."	—	7	28	11	1	21
Jalap.....bls	—	24	133	117	—	46
Nux vomica....pkgs	1,253	52	1,554	23	1,553	57
Oils—						
Aniseed, star cs	—	17	274	219	20	34
Cassia....."	90	57	104	66	90	72
Castor.....pkgs	6	168	148	764	223	354
Cocoa-nut....tons	111	111	194	299	223	215
Olive.....cks, etc.	215	242	538	621	413	416
Palm.....tons	—	—	7	1	—	2
Quinine.....lbs	2,037	4,468	193,814	203,041	2,630	7,328
Rhubarb.....chts	5	59	196	259	54	107
Sarsaparilla.....bls	90	82	140	249	129	149
Senna.....pkgs	287	487	3,184	2,317	1,080	871
Shellac.....cs	2,551	6,330	38,595	24,033	10,121	14,611
Sticklac....."	—	95	387	226	150	144
Turmeric.....tons	9	39	344	460	29	55
Wax, bees'.....pkgs	253	623	1,470	1,439	682	893
"Japan.....cs, etc.	248	63	405	450	298	160

* Corrected.

† Includes quantity at Red Lion, Bull, and Smith's Wharves also at the Docks.

‡ Includes 104 packages Caruauba wax.

THE Japanese export of soap to China has been increasing of late, says the monthly report of the Yokohama Chamber of Commerce. The Chinese have been using a peculiar kind of soap, known as "Oishi," which is made of animal fat and powdered beans, and spiced with various substances. It is put up in porcelain vessels, and costs from 8c. to 10c.



TO CORRESPONDENTS.—Please write clearly and concisely on one side of the paper only. All communications should be accompanied by the names and addresses of the writers. If queries are submitted, each should be written on a separate piece of paper. We do not reply to queries by post, and can only answer on subjects of general interest.

The Pharmacy Bill.

The following letter from the Federation of Pharmaceutical Associations has been sent to the Secretaries of all chemists' local Associations in Great Britain:

DEAR SIR,—I am directed by my Executive to draw your attention to the very important fact that the New Pharmacy Bill is down for the second reading on Friday 24th inst.

As this Bill is one of vital importance to all chemists, my Executive strongly recommend that the Secretaries of the various Associations throughout the country should immediately communicate with their Parliamentary representatives, asking them to be in their places on that date to support the Bill as now amended.

It is suggested that the attention of your member should be directed to the alteration in the Bill, and to the principle for which we are contending, and that his influence should be used to get support for the Government to have the measure discussed.

I trust, therefore, that you and the members of your Association will take immediate steps in the matter.

Yours faithfully,

W. WATSON-WILL (Hon. Treasurer and Secretary).

Co-operative Societies and Patents.

SIR,—Like very many others in the drug-trade I welcomed the establishment of the P.A.T.A. which assured us some profit upon articles placed on their list. Having such proprietaries as Fenning's Powders, Scott's Emulsion, and Owbridge's Lung Tonic successfully protected it put new life into one. Alas! it has been but of short duration. Our welcome friend the P.A.T.A. has turned out to be an enemy in disguise, though quite innocently. The following explanation will, I think, prove my assertion. I am compelled to sell at the P.A.T.A. prices or I am black-balled and my supplies cut off altogether; but the stores, while selling at the fixed minimum retail, give dividends of 15 per cent. to members and 12½ per cent. to non-members (*i.e.*, the general public). Is that cutting below price or not? If not, why not? Previous to the above articles being protected and taken up by the Co-Op., my sales of the three above-mentioned articles were three or four dozen per week. Now they are practically nil. This is a matter upon which the trade should speak out. It is one of vital importance. I am told Elliman's will not supply the stores, or rather only on such terms that compel them to sell at full price. Why should this not be done by proprietors of P.A.T.A. articles? I hope others similarly situated to myself will express their views.

Yours faithfully

IN A FIX. (157/66.)

Sheep-dips for Scab.

SIR,—My attention has been drawn to the remarks on this subject in your issue of February 18, p. 277, and having had nearly fifty years' experience of this disease in all its stages, it may not be out of place for me to make a few brief comments thereon. I agree that No. 1 cure—*viz.* lime and sulphur—is not a desirable remedy, owing to the injury to wool proved to be caused from its use. As to No. 2, "carbolic dips," I may state that my firm, then Corry & Soper, incurred considerable outlay in 1864-5, in introducing a carbolic dip throughout the country (practically the same proportions as advised by the Board of Agriculture), which was thoroughly tested as a dip for scab, but it failed completely. With regard to your correspondent's comments on "tobacco dip," No. 3, I am at a loss to understand how such an opinion on the merits of tobacco could have arisen. My experience with tobacco as a remedy for the cure of scab in sheep dates from 1857, and my firm obtained the

grant from her Majesty's Treasury in 1866 for working it in bond, free of duty, for scab and other agricultural and horticultural uses. I am quite convinced that there is no other remedy to-day in the market for scab and general results that will compete with tobacco dressings or dips if they are prepared without other injurious additions, such as spirit of tar, crude carbolic acid, corrosive sublimate, etc., which stain the wool and make the sheep giddy. Tobacco does not do this. I will give you clear evidence that tobacco will neither stain the wool nor affect the sheep in any way. "Long's Specific," an old dressing for scab, was introduced in 1848. One of its ingredients is 2 lbs. of strong leaf-tobacco in every gallon. It has cured millions of sheep with scab, and no case of injury to wool or a sheep injured by its use has ever occurred with the genuine article. It has had a struggle to stand against the many cheap poisonous dips, but it is relied on still in some of the largest sheep-producing counties as the only safe and certain remedy, and one of its leading features has been that it not only cures the disease, but it also produces a rapid growth of wool, strong in staple, full of yolk, and wholly free from stain. To give practical effect to these remarks I am willing to meet your correspondent at any farm in England where sheep are affected with scab, and, with other approved witnesses, to carry out an experiment openly with "Long's Non-poisonous Specific" as a dressing, or with "Nicotina."

Yours obediently,

Shad Thames, S.E., March 6.

W. L. CORRY.

Wearing of Aprons.

SIR,—Having worn out three suits of clothes in about as many months, I for one should welcome the "return of the apron." But why not adopt a species of black overall, like a church cassock? It would give a "Master of Arts" appearance to an assistant, and if surmounted by a pair of eye-glasses would win the confidence of all the faddy customers, besides saving the assistant excessive tailor's bills.

Yours truly,

AJAX. (133/49.)

Label-dampers.

SIR,—I quite endorse Mr. Sampson's remarks *re* label-dampers, which are as they exist, as a rule, nothing more than an abomination. I have, however, found much less inconvenience with one I made myself than with any other I have used in various pharmacies. It is on the same capillary principle of which he complains, but I am inclined to think the material used for the damper is what is most at fault. The one I speak of is made of spongipiline stretched over the top of a turned wood box (with rim cut off) and fitted into an ordinary gallipot. The idea appeared originally in the *C. & D.*, I believe.

Yours truly,

SYRESA. (121/39.)

In Business for Profit.

SIR,—Through the medium of your valuable columns may I draw criticism on the report of the London Chemists' Association's meeting *re* Carter's pills and Williams's pills? Popular remedies remaining unprotected are now so few that it seems to me, as a retailer, we have the remedy in our own hands. Six weeks ago I decided that to pay 10s. 8d. for Carter's and sell at 10½d. would not provide for old age. I find I must sell at 10½d. if at all. Certainly supplies may be obtained from the same channels as those through which the public obtain theirs; but why should an educated Englishman do this for America? My method is this. I procured some liver-pills, neatly packed, which retail unstamped at 6½d. per tube. When asked for Carter's pills I tell my client in plain, ungarnished English the true reason I do not stock, and in five weeks have sold twenty-two tubes of my own, once only failing to do so. The real reason appeals to a business-man, and if told plainly he believes the fact. No one is more averse to "planting" something else than I am, but I do object to sell goods at less than cost. Will not ninety-nine other retailers each plant a nail? If so, the result would be felt at once. In conclusion, let me say it is of no use to say you are "just out of them," as nowadays the public are too smart to be whitewashed. One word to those who, I sincerely hope, will follow my lead: "Do not be afraid to tell the truth—nothing else will

do"; and "Mind your own pills are good: test their efficacy and solubility for yourselves."

Yours faithfully,

Chadwell Heath, February 13.

E. MILLER.

Chemists' Assistants in the East.

SIR,—I have read with interest a letter in your issue of January 7 on assistants' salaries in the Transvaal, and I feel that a few particulars of the life and work of chemists' assistants in the Straits Settlements might be of interest to any young men contemplating engagements in these parts or in China.

It is no uncommon thing for assistants to be offered a salary of 15*l.* per month to commence with, rising probably by annual increments of 2*l.* or 2*l.* 10*s.* per month. To a young man at home this may seem a fair, and perhaps to some a princely, salary. Conditions of life, however, differ greatly from those at home, and oftener than not the candidate for a situation can get no information on this point other than what the London wholesale house supplies. The wholesale export firms, who usually engage assistants for abroad, are naturally anxious to do the best they can for their clients, and give only such information as best suits them. Very often they are not in a position to give more than the barest possible details. An assistant usually lives in a boarding-house, this being more economical and more private than an hotel. Board and lodgings cost on an average 8*l.* 10*s.* per month. To this must be added, as absolutely necessary expenses, servant 1*l.* per month, washing 10*s.* or 12*s.*, ricksha to and from business (walking being out of the question) 1*l.* 10*s.*, more if two or three miles from town. Married men find the foregoing expenses more than doubled, as it means keeping up a house with the usual retinue of servants, not to speak of a carriage costing about 3*l.* a month. Clothing, too, is expensive. On arriving, a man usually finds he has to discard the greater part of his home outfit and start afresh. White suits, of which he will require at least fifteen, having to use a clean one every day, cost 7*s.* each. A dress suit may also be classed among the necessities, and if he is not the fortunate possessor of one, that will cost 8*l.* Assistants usually come out on agreements of three, four, or five years, counting from the date of arrival, and may be paid at the rate of so many dollars per month or in sterling at current rate of exchange. The dollar at present is worth almost 2*s.*, but about three years ago it dropped as low as 1*s.* 7*d.* There is, however, a likelihood of the dollar being fixed at not less than 2*s.* Passage may be paid out only or out and home. The ordinary passenger lines charge 40*l.* for a second-class passage, so if an assistant on a short agreement has to pay his passage home it means he must be very economical indeed. Most of the establishments in the Straits are owned by medical men or by limited-liability companies with medical men as their principal shareholders and directors; and an assistant on arriving will, in most cases, find himself manager of the concern with a staff of perhaps eight or more Chinese, Malay, and Tamil assistants. His first duty will be to learn the Malay language, the *lingua franca* of the Straits—not a very difficult task to the average man. Agreements are signed in London and again on arriving here, and invariably prohibit the employé from starting business on his own account in the same settlement at the expiry of the contracted term or any time after. Sometimes he is debarred from taking employment with another firm in the same town. Hours of duty are short, 9 A.M. to 5 P.M. being the rule, the mid-day meal, or tiffin, being taken in the shop. On Saturdays most places close at 3 P.M., and Sunday hours seldom exceed two in the middle of the day. Although the hours are short the temperature of 88° F. in the shade all the year round is trying, and one feels more tired at the end of the day than he would after a twelve or thirteen hours' day at home. The credit system is the rule, and the chemist's assistant invariably finds that his duties take him more into the realm of bookkeeping than pharmacy. The counter and dispensing work is mostly done by Chinese, who make good assistants. The climate is hot, but fairly healthy, although after a few years it becomes rather depressing owing to the absence of any cool season.

Although places of business close at 5 P.M., there is little time left for outdoor recreation, as it is dark by 6.30. Re-

creations, too, cost money, as they cannot be got without becoming a member of a club. Entrance-fees to golf, tennis, cricket, swimming, and sporting clubs never cost less than 1*l.*, while monthly subscriptions average 3*s.* each club, and no young man can afford to so far ostracise himself from society and healthful recreation as not to belong to two or three clubs at least. If he wish to have a seat in church, this will cost another 3*s.* per month. Daily newspapers cost 4*d.* and weeklies 10*d.* A man must have a certain amount of liquid refreshment, and a few dozen of aerated waters do not last long in this climate. Drinks at any respectable hotel cost 6*d.* each. Should a travelling opera company or circus visit the town, seats will cost 6*s.* Sometimes free furnished quarters are offered, but, after all, this does not render cost of living much cheaper, and entails close confinement to business with its attendant night-bell worries. Although there is no Pharmacy Act in the Straits, European managers and assistants are expected to be qualified. Should an unqualified man come along, he would have to undergo an examination by the local Government officials before being granted a licence to sell or dispense any preparation of morphine or other alkaloid of opium. As no man comes out to the East for the good of his health, the question of salary and probable expenses is of importance. From my own experience I can safely say that the sovereign at home goes quite as far as 3*l.* out here; and when one considers the risks to health, separation from friends, and all that is worth living for, it behoves him to look well into the matter of salary and terms of agreement before deciding to try his fortune in the Far East.

Yours faithfully,

Singapore, Feb. 9.

TUKANG OBAT. (153/59.)

Letters in Brief.

SEA-SICKNESS PREVENTION.—*Messrs. Burgoyne, Burbidges & Co.* write: "Referring to your correspondence on sea-sickness, allow us to say that chlorobrom rarely or never fails in the treatment of sea-sickness, and probably one of the best proofs we can offer anyone of this is the report of the medical officers of ships, in which are the names of many well-known medical officers of leading liners, and we certainly think that if anyone will try chlorobrom according to the instructions they will find they have a genuine remedy for sea-sickness."

In reply to Mr. William Bousfield, S. L. (157/4) states: "In a long and varied experience I have never known hyoscamine to fail as a preventive of sea-sickness. It is best given in the form of granules ($\frac{1}{4}$ milligram in each) as prepared by Chanteaud, of Paris, two to be taken on an empty stomach half an hour before sailing, one when once on board ship, and one every hour afterwards till about a dozen have been taken."

Dispensing Note.

Quinine and Sulphurous Acid.

M. & S. (133/73), writing further in regard to this subject (see C. & D., February 10, p. 259), say that the ingredients were purchased from them separately by a regular customer. "M. & S." supplied an English make of quinine, and opened a fresh bottle of sulphurous acid. A few days afterwards the lady called to say that she thought the quinine must be adulterated, as it did not dissolve in the sulphurous acid. "M. & S." tried other samples of quinine, but could not obtain a clear solution, and explained to the customer that the quinine was insoluble in the sulphurous acid. She stated (she is, by the way, the daughter of a medical man) that the recipe was one written by her father which her mother had prepared for years, and other chemists' quinine always dissolved. "M. & S." questioned her as to the possibility of sulphuric acid (probably acid. sulph. dil.) having been supplied, but she assured them that the H₂SO₄ was what had always been asked for, and the ingredients purchased separately mixed by themselves, a clear solution resulting. The ingredients were:

Quininae sulph.	...	...	...	3ij.
Acid. sulphurosi	...	...	...	3iv.
Glycerini	...	...	...	3iv.
Aq. rosæ	...	...	...	3iv.
Aq.	...	...	...	q.s.

Order of mixing as written.

[The trouble in this case was in all probability due to the use of fresh sulphurous acid containing little or no sulphuric acid, which is gradually formed on exposure. There is nothing wrong with the quinine sulphate.]

Legal Queries.

Before submitting queries in this department, subscribers are advised to consult the "C. & D. Diary," 1905, on General and Trade laws, p. 287; Pharmacy and Poison laws, p. 299, and Medicine-stamp Acts, p. 279. In respect to the last we can mark labels "Liable" or "Not liable" if they are sent in duplicate and with a stamped and addressed envelope for return of the marked ones.

Apprentice (134/46).—TRAINING FOR THE MINOR EXAMINATION, or any other pharmaceutical examination in Great Britain, does not involve compulsory apprenticeship. Under by-law it is required that the candidate shall produce a written declaration, signed by a chemist and druggist, pharmaceutical chemist, or medical practitioner, that he has been practically engaged in dispensing medical prescriptions for at least three years. Whether this is with a qualified person or unqualified, a limited company, hospital, or doctor, does not matter. In Ireland actual apprenticeship for four years with a qualified person (not a company) is necessary.

Prizette (146/68).—HEAD-POWDERS.—The envelope makes your head-powder liable by stating that it is for "neuralgia, headache, tic, etc.," each of these being an ailment.

Omega (146/51).—VASELINE TRADE-MARK.—See reply to "New Subscriber" in our issue of February 11, p. 260. We understand that the Chesebrough Co. always requires those to whom it sells vaseline to give an undertaking as to labelling in case of repacking for sale, and that such contracts are binding upon those who enter into them. How far they would be binding upon you and others who are not parties to them is another question. Submit an exact statement of the conditions of your supply and resale.

Midlander (147/33).—LABEL FOR DENTIFRICE.—Your label does not hold out the preparation for the prevention or cure of any human ailment. Therefore the article is regarded as a toilet-preparation, and you may use the surname in the possessive case, and say "Prepared only by —" without incurring medicine stamp-duty. The Board of Inland Revenue has on several occasions stated that "prevents decay" is not a dutiable phrase.

Surgeon (149/42).—PARTNERSHIP.—The deed of partnership should contain a clause providing for automatic dissolution if one of the partners fails to perform his undertaking. Otherwise the defaulting partner should receive notice that the partnership will be dissolved, and if he does not agree legal proceedings have to be taken. The other partner or partners have no right to put up the business for sale. In the case which you submit you do not say that B has not taken up the interests required, but that it is impossible for him to complete the purchase. Thus stated, there is no evidence of failure on B's part.

Old Subscriber (148/32).—COUNTY COURT JURISDICTION.—In the ordinary course a County Court summons should be taken out in the court of the district in which the defendant resides or carries on business, but the plaintiff may, by leave of the Court, issue his summons in the court of a district in which the cause, or part of the cause, of action has arisen. Doubtless the plaintiff in the case you mention got leave to issue his summons in a Metropolitan County Court. Though the goods were ordered in a provincial town, and delivered there by the plaintiffs, if the proper place of payment was in a Metropolitan district, and there has been default in payment, that would be sufficient to constitute part of the cause of action arising in that district. In the absence of an express or tacit agreement to the contrary, the place of payment of a debt is at the residence or place of business of the creditor, and on the facts stated by you there is nothing to show that the parties agreed to depart from the recognised rule. In any case, it is a poor game objecting to the jurisdiction. The defendant has to give due notice of his objection, and has to attend in person, or by representative, in court to uphold his objection. If he succeed he gets his costs, but not always the whole of them, and the plaintiff can then bring his summons in the proper court. There appears to be no legal answer to the plaintiff's claim for the debt. The traveller was paid the account contrary to the express directions of the firm, and clearly the traveller was not their agent for the purpose of collecting money.

Ohio (156/65).—THE WORD LANOLIN was used by Dr. Liebreich in his letters patent to describe the product obtained from wool fat by the process described therein. The exclusive right to the word expired with the letters patent.

Beta (156/69).—SALE OF FELLOWS' SYRUP.—It is assumed that this preparation is one of strychnine, and, if so, it is a Part 1 poison, which may only be sold under the conditions of that part, or dispensed with an appropriate entry in the prescription book. The latter course is now followed by many chemists. The mother tincture of aconite (homœopathic) is

undoubtedly a Part 1 poison, but this cannot be said of all homœopathic preparations of aconite. The judgment in Pharmaceutical Society v. Delves would probably exclude the third dilution. See *C. & D. Diary*, p. 302.

Sillicus (156/16).—REGISTERING A PROPRIETARY ARTICLE.—You should decide what part of the article requires registration. If the composition, that can only be done by a patent, and this is not advisable. If the name, this can be done either through Stationers' Hall (by registering the label), or as a trade-mark. You will find all particulars as to procedure in the *C. & D. Diary*, p. 240.

J. B. (158/14) asks if the following label is liable to medicine stamp-duty:

Outward application only.

TRY SMITH ONLY.

No house in the world should be without it.

For application at any time.

A primary condition for the charge of duty is that the medicine shall be held out or recommended for the prevention, cure, or relief of a human ailment. There is no reference to anything of the kind in the above label.

Miscellaneous Inquiries.

We endeavour to reply promptly and practically to trade questions of general interest, but cannot guarantee insertion of replies on a particular date, nor can we repeat information given during the past twelve months.

A. Bee (141/3); Out-of-date (140/62).—PERSULPHATES AND PERCARBONATES are produced by electro-chemical methods, a whole range of new chemicals resulting from the applications of electro-chemistry. There have been many references to these salts in the *C. & D.*, recent reports being December 19, 1903, p. 1023, and October 18, 1902, p. 667. Recent books dealing with the subject are Leffeldt's "Electro-chemistry," 5s. (Longmans), 1904; Lüpke's "Elements of Electro-Chemistry," 7s. 6d. (Grevel), 1903; Elbs' "Electrolytic Preparations," 4s. 6d. (Arnold), 1903; Arrhenius' "Text-book of Electro-chemistry," 9s. 6d. (Longmans), 1902.

Stirling (138/36).—THE TONIC CAPSULES contain Bland's pill mass, and are quoted in most wholesale druggists' price-lists.

Par (Paris) (156/5).—GLUTEN is insoluble in water, cold alcohol, ether, or oils, but it is soluble in dilute acids and caustic alkaline solutions. The solubility in alkalies is not of much avail if the substance is required for food, but this property is taken advantage of by bill-posters in the preparation of paste for sticking-purposes.

Chippendale (140/49).—WORM-EATEN FURNITURE is usually treated with a solution of corrosive sublimate in methylated spirit. This liquid, of a strength of 1 oz. to the pint, is applied by means of a feather to the portions of furniture that are worm-eaten. Another treatment is to apply benzine and carbolic acid; and a more drastic method is fumigation with hydrocyanic acid.

N. & W. (116/55).—CASEIN FOAM.—The modern toilet preparations put forward as without grease are made with a saponaceous or casein basis, or a combination of the two. The object of the ammonia in the formula given in the *C. & D.*, December 17, p. 996, is to promote the solution of the casein; and using that recipe, and substituting crème d'amande for the white vaseline, you will be able to produce a nice preparation.

Wychian (135/7).—UNG. SULPHURIS CO.—The formula you allude to is one that was official in the London Pharmacopœia, 1851, and was used for itch:

Sulphur	...	...	...	4 oz.
Powdered white hellebore	...	...	...	10 drs.
Potassium nitrate	...	...	...	40 grains
Soft soap	...	...	...	4 oz.
Lard	...	...	...	1 lb.

Rub together.

In earlier editions of the P.L. oil of bergamot was added as a perfume, and in that form is still sold in some parts of the country as an itch-ointment.

Hawthorn (116/19).—TITLING NEGATIVES.—The theory of the chemical method of titling negatives by means of the mercuric-chloride mixture is that the silver salts in the negative will be rendered denser where the solution is applied. The formula you send, in which an attempt has been made to thicken the mercury solution to facilitate its application, is not workable. To produce a darker part of the negative—i.e., to have a white title on the paper print—a chemical method is unnecessary. If the title is written with any opaque paint on a flexible material and transferred to the negative, the desired result is obtained. If rubber type is used, the type can be arranged backwards, so that the title can be stamped direct

on to the negative. It is when a black title is needed on the print that chemical methods of treating the negative are required, iodine solution thickened with gum being what is ordinarily used, followed by a hypo bath to dissolve out the bleached silver salts.

E. H. H. (137/38).—The sample of tincture is, we think, *ambul.* You will notice a characteristic fluorescence on dilution with water.

J. H. B. (122/38).—PETROLEUM EMULSION.—The B.P.C. formula is—

Liquid paraffin	...	...	8 oz.
Gum acacia	...	...	4 oz.
Oil of cinnamon	...	...	24 minims
Tragacanth	...	...	120 grains
Mix and add—			
Water	...	...	6 oz.

Dissolve sodium hypophosphite and calcium hypophosphite, of each 192 grains, in water 4 oz.; add to the above with constant trituration, then water q. s. to 24 oz.

You will find other recipes in "Pharmaceutical Formulas," Vols. I. and II.

A. J. C. (125/11).—GLAZING EARTHENWARE.—In outline the process of opaque glazing is to suspend the glaze in water and dip the biscuit ware in the liquid. A portion of the water is absorbed and a thin coating of glaze left on the surface. The articles are placed in "saggers" and submitted to a firing less intense than that given in making the ware. Under the action of the heat the glaze melts and spreads over the surface of the article. The following recipe gives an idea of the composition of the glaze used for English earthenware:

The Fritt.		The Glaze.	
Borax	48 parts	Fritt	230 parts
Chalk	38 "	Flint	60 "
Flint	62 "	China stone	160 "
Soda	26 "	White-lead	120 "
Kaolin	30 "		

C. L. W. (137/25).—MAKING PEPSIN.—The process devised by Dr. L. S. Beale in 1872, and official in the B.P. 1885, is as follows: The stomach of a freshly killed pig, sheep, or calf having been cut open and laid on a board with the inner surface upwards, any adhering portions of food, dirt, or other impurity are to be removed, and the exposed surface slightly and rapidly washed with a little cold water; the cleansed mucous membrane is then to be scraped with a blunt knife or other suitable instrument, with some pressure, and the viscid pulp thus obtained is to be immediately spread over the surface of glass or glazed earthenware and quickly dried at a temperature not exceeding 100° C. The dried residue is to be reduced to powder and preserved in a stoppered bottle. This forms what would now be called crude pepsin, as modern brands of pepsin are made by digesting minced pigs' stomachs in dilute hydrochloric acid, filtering and evaporating the solution *in vacuo*, and scaling on glass. The product of the B.P. 1885 process may be purified by the hydrochloric-acid method.

VARGUS.—In the *C. & D.*, March 4, p. 360, inquiry was made as to the identity of "Vargus" used in a rubbing bottle. A number of replies since received show that verjuice is intended:

"Vargus" is evidently a corruption of verjuice.—C. S. Ashton.

In the Midlands "Crab Varges" is sometimes asked for. Sour cider answers well: vinegar made from crab apples.—F. H. Exon.

"Verjuice" is crab-apple vinegar, and *vargus* spelt phonetically=verjuice. If your inquirer uses a white-wine vinegar or acid, acet. dil. he will not be far off the mark.—G. R. Hankinson.

"Vargus," sometimes written in old provincial recipes *verjuice*, calls for acetic acid. Twenty years back, whilst in Cheshire and North Wales, I frequently came across veterinary recipes, *verjuice* often specified, and have sold acetic acid and labelled it such.—J. R.

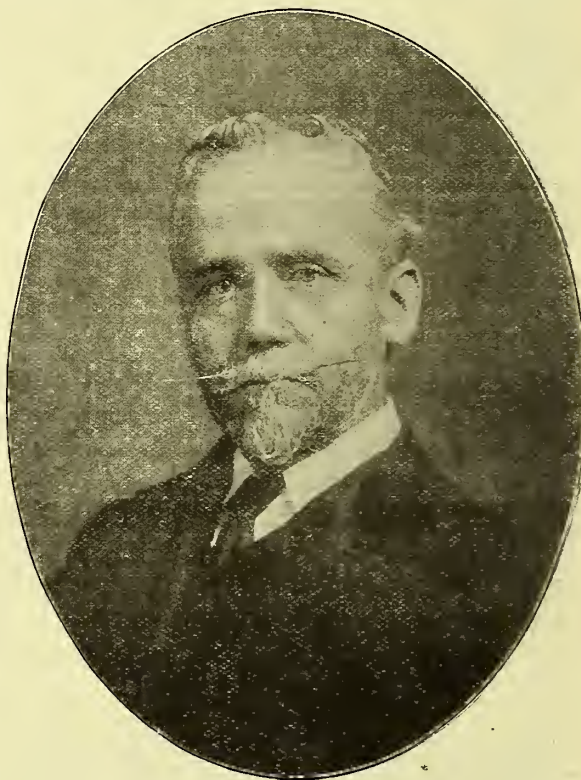
"Vargus" is probably a corruption of *verjuice*, a sour liquor obtained from the wild or crab apple, or more probably the sour liquor from the expression of unripe grapes. Occasionally used as an external application and for making sauces, mostly in France (French, *Verjus*).—J. A. R. Hilton.

The nearest solution to your difficulty will be to try "verjuice." The bucolic mind has many ways of spelling this, and it was a common ingredient in rubbing-bottle in some parts of the country forty years ago, though mostly used in veterinary embrocation.—Oldfield, Pattinson & Co.

B. H. (156/19).—GUM ACROIDES.—There is a limited use for this as a varnish material; perhaps more is used in the manufacture of sealing-wax. In varnish-making the red variety takes the place of garnet lac or part of the shellac and dragon's blood, but in properties it more resembles sandarac than shellac. You will find numerous formulas for spirit varnishes in "Pharmaceutical Formulas."

The Hon. Francis Watts, C.M.G., F.C.S., F.J.C., B.Sc., D.Sc.

THIS is the chemist whom the King honoured with a C.M.G. last November. He is a Minor man, and served his apprenticeship with the late Mr. W. Coleman, of Wolverhampton, but the degrees which he holds show that he specialised in science after he negotiated the Minor in 1881. He went to the West Indies in 1883 as chemist to the Montserrat Co., Ltd. On January 1, 1889, he was appointed analytical chemist to the Government of Antigua. During his tenure of office a good deal of attention was directed to matters relating to agriculture, and extensive experiments with sugar-cane were carried out, and one result was that in 1898 he was appointed analytical and



agricultural chemist to the Government of Jamaica, but he returned to the Leeward Islands in the following year as analytical and agricultural chemist to the Government of that Colony, and in 1903 became also superintendent of agriculture for the Leeward Islands, an appointment connected with the Imperial Department of Agriculture for the West Indies. In the discharge of the duties of his office he directs extensive experiments with various crops, including sugar-cane, cotton, limes, cocoa, etc., and has given much attention to soil-analysis and agricultural education. Dr. Watts's services in connection with central sugar factories are much thought of. He has been a member of the Executive Council of the Leeward Islands since 1899, and of Antigua since 1903. Dr. Watts is an F.C.S. (1883), an F.I.C. (1889), an Associate of Mason College, Birmingham (1899), B.Sc. Birmingham (1902), and proceeded under the ordinary regulations to the degree of Doctor of Science, Birmingham, in 1904. Altogether an excellent record for a Minor man. We are indebted to "The West India Committee Circular" for the portrait.

THE "San Francisco Druggist" states that in the vicinity of Corpus Christi, Texas, a splendid sample of senna has been grown and marketed at a substantial profit.

South African News.

(From our own Correspondents.)

Note.—"The Chemist and Druggist" is regularly supplied by order to all the members of all the Pharmaceutical Societies in British South Africa, viz.:

South African Pharmaceutical Association.
Pharmaceutical Society of Cape Colony.
Natal Pharmaceutical Society.
Transvaal Pharmaceutical Society.
Rhodesia Pharmaceutical Society.
Northern District Chemists' Association.
Pharmaceutical Society of Orange River Colony.

Cape Colony.

IN THE LIST of "Intentions to Surrender" under official bankruptcy news occurs the name of Edward W. H. Jeffrey (trading as W. H. Jeffrey & Co.), chemist and druggist, Victoria West, C.C.

CAPE TOWN INDUSTRIAL EXHIBITION.—The closing day of this exhibition was February 28. Previously there had been some talk of running the exhibition for another two months, but after a meeting of the exhibitors and promoters it was decided to close on the date originally fixed. This decision was wise, inasmuch as the rainy season starts, as a rule, in March and continues until July. The "gates" have been fairly good. Hospital Day, February 8, induced a record attendance, despite the south-easter prevailing, and the local hospitals will benefit to the extent of about 800/. The executive and members of the various committees deserve great credit for the successful manner in which everything was carried on. Mr. J. Solomon had charge of the stand of Messrs. W. Gossage & Sons, Ltd., and Messrs. Parker & Co. (Port Elizabeth) looked after the interests of Messrs. Tozer, Kemsley & Fisher, Ltd. A list of the awards to firms connected with the drug trade is appended:

GRAND PRIZE.

Burroughs Wellcome & Co., London. Collective exhibit of medicines.

GOLD MEDALS.

Chiswick Soap Co., London. Soft soap, carpet-soap, saddle-soap, extract of soap, and soap polish.
Luce's Eau de Cologne, London. Perfumes.
W. Gossage & Son, Ltd., Widnes. "Housewife" soap, "magical" tablets, blue mottled soap, and yellow bar soaps.
J. Margerison & Sons, Preston. Toilet-soaps.
South African Wine and Brandy Co. Linseed oil, cotton-seed oil, cotton-seed cake, and linseed cake.
Messrs. E. Breffit & Co., Ltd., London. Medicine bottles, etc.
Berkefeld Filter Co., London. Filters.
C. J. Hewlett & Son, London. Drugs and galenicals.
United Alkali Co., Ltd., Liverpool. Chemicals.
Jeyes' Sanitary Compounds Co., Ltd., London. Jeyes' compound, Jeyes' disinfectant, cylin, and cylin preparations.
Meyer & Meltzer, London. Surgical instruments.
Henri Nestlé, Vevey and London. Nestlé's milk and Milo food.
Duckworth & Co., Manchester. Essences.
Rock Salt Mining Association, Ausschuss & Heinsalswerke (Stassfurt). Common salt.
German Potash Syndicate, Verkanfssyndikat & Kahwerke (Stassfurt). Collective exhibit.
Edme, Ltd., Mitley, Essex. Malt extract.
W. Cooper & Nephews, Berkhamsted. Cooper's sheep dips.
T. Cook & Sons, Ltd. (Cape Town). Scientific instruments.
Claudius Ash & Sons, Ltd., London. Dental appliances.
South African Chemical Works (I. Wealder). Leather polishes.
Jaeger & Kierlich. Leather polishes.
Chiswick Soap Works, London. Leather polishes.
Prout & Co. Leather dubbin.
Durban Oil & Soap Co. Ground nut oil, diamond soap, cocoa-nut cake, and ground nut cake.
Faulding & Co., London. Solypol soap, eucalyptus oil, and milk emulsion.
P. J. Petersen & Co. (Cape Town). Surgical apparatus.
Vacuum Oil Co., Ltd., London. Lubricating oils.
Bratby & Hinchliffe, Ltd., Great Ancoats, Manchester. Soda-water machinery.
Evans Sons Lescher & Webb, Ltd., Liverpool and London. Montserrat lime-juice.

SILVER MEDALS.

Petol, Ltd., Cambridge. Disinfectants (liquid powder and soap).
W. Berry, Homerton, N.E. Leather polishes.
Sanoper Soap Co. Sanoper soap.
Jeyes' Sanitary Compound Co., Ltd., London. Disinfectant and toilet soaps.
George Clyne. Colonial fish oil.
Paine & Co., Ltd., St. Neots. Malt extract.
Fermentine Co., Ltd., London. Fermentine.
T. E. Kleewein (Krems, near Vienna). Marienbad pills.
Brocades en Stheeman (Meppel, Holland). Medicines.
Goodall, Backhouse & Co., Leeds. Effervescent saline.
Smith, Johnston & Co. Bendall's lime-juice.
A. Riddle & Co., Ltd., London. Stowers' natural lemon squash, orange bitters, and peach bitters.
Kops & Rawlings, Ltd. (Cape Town). Soda waters, etc.
Evans Sons Lescher & Webb, Ltd., Liverpool and London. Montserrat lime-juice and lime-juice cordial.
Madame Pomeroy, Ltd., London. Toilet preparations.
J. & D. Hamilton (Glasgow). Radium sheep-dip and disinfectants.
P. J. Petersen & Co. (Cape Town). Essences and colours.
Clarke & Creswell (Gillard & Co.). Lime-juice cordial.
Goodall, Backhouse & Co., Leeds. Lime-juice cordial, lemon squash, and ginger cordial.
C. H. Glover & Co., Ltd., London. Mineral-water and wine cases.
Durban Oil & Soap Co., Ltd. Blue mottled soap, linseed oil, rape oil, castor oil, cocoa-nut oil, and soft soap.
H. Nestlé, Vevey and London. Viking milk.
Evans Sons Lescher & Webb, Ltd., Liverpool and London. Arrowroot.
Manchester Chemical Co., Manchester. Collective exhibit.

BRONZE MEDALS.

Smith, Johnston & Co. Ginger-beer essence.
A. Riddle & Co., Ltd., London. Stower's clarified lemon squash and lime-juice cordial.
Chivers & Co., Bath. Lime-juice essence.
United Alkali Co., Ltd., Liverpool. Soap.
Evans Sons Lescher & Webb, Ltd., Liverpool and London. Lime-juice jujubes and fruit tablets.
Rheumaticuro Co. Jones's rheumaticuro.
E. H. O. de Villiers (Cape Town). Herb liniment.

THE RAVEN CASE.—The decision in this case has already been reported in this journal (see issue of February 18, p. 269). The case was heard by the Hon. Justice Hopley and a jury at Capetown on February 10. Mr. Nightingale prosecuted and Mr. B. Upington appeared for the accused, who was charged on eight counts. The indictment alleged that he had appropriated to his own use six guineas which should have been paid as Messrs. Burroughs Wellcome & Co.'s subscription to the Cape Town Chamber of Commerce; certain sums paid to the firm by debtors in discharge of their accounts; and a sum of money amounting to 303/. 4s. 9d., belonging to the firm. Evidence for the prosecution was given by A. H. T. Parry (Standard Bank), A. S. Good (Bank of Africa), D. H. Vos Steyn (Moorreesburg), F. W. Good (Somerset Strand), A. G. Martin, T. F. Dalgleish (E. R. Syfret & Co.), F. G. Ellis (B. W. & Co.), and A. B. Hector (Australian and Cape manager to B. W. & Co.). The last-named witness was severely cross-examined by Mr. Upington as to his own willingness to drop the proceedings, which the firm would not permit. No evidence was called for the defence, and his Lordship, in summing up, said although the accused had the firm's full general power of attorney, there was nothing in the document mentioned specifically, or that could be implied, giving Raven authority to use any of the firm's money for his private purposes. It was a significant point that at the end of each half-year Raven's indebtedness had grown larger. It would be a most dangerous doctrine to lay down that a man who had taken money even with the full intention of paying it back, was not guilty of a crime, and had not had criminal intent. The jury, after a brief retirement, found the accused guilty on all counts. His Lordship, addressing Raven, said he recognised that a great part of the punishment in such cases is the degradation, the loss of position, the lowering in the social scale, which a prisoner must suffer. Therefore he inflicted the mildest sentence, but one to deter others from doing likewise—viz., twelve months' imprisonment with hard labour. We learn that Mrs. Raven has been presented with a purse, to which leading firms and chemists have contributed, Messrs. Burroughs Wellcome & Co. giving fifty guineas. The money is to be devoted principally to the children.

Natal.

MR. F. A. BENSON has opened a business at 60 Commercial Road, Pietermaritzburg.

MR. T. W. DUKES, chemist, Vryheid, has been elected a member of the Local Governing Board. Mr. Dukes is also Chairman of the Committee of the Vryheid Building Society and a member of the Committee of the Vryheid Ratepayers' Association.

SPIRIT-RETURN.—According to the return of the Controller of Excise, 3,165 proof gals. of methylated spirit was manufactured in Natal during January. The amount disposed of included 4,071 gals. from distilleries for consumption in Natal, and 2,104 gals. for export "overberg," or a total of 6,175 gals. Of rectified and compounded spirits 165 gals. was disposed of to chemists, and for home consumption 988 gals. was disposed of.

AN A. & H. BRANCH.—Messrs. Allen & Hanburys, Ltd., have opened a branch in Durban. In addition to their own preparations, some of which have a large sale there, due to medical favour, Messrs. Allen & Hanburys, Ltd., are agents for the products of Messrs. Howards & Sons, Ltd. Our Durban correspondent states that Messrs. Allen & Hanburys intend carrying a large stock of drugs and general chemists' goods, and he considers it surprising that none of the home wholesale firms who have been doing good business in South Africa for many years have not seriously considered the advisability of having branches in the country.

Transvaal.

BOARD OF PHARMACY.—Mr. Gorges, Assistant Colonial Secretary, who at one time was Secretary to the Cape Medical Council and Pharmacy Board, has agreed to act in a similar capacity for the Transvaal bodies for three or four months, when, it is hoped, business will be well organised. The qualifying examination of the Board of Pharmacy will be practically the same as the Minor examination of Great Britain, and the syllabus was almost ready for printing when the last mail left.

"FRIENDS AND FACES" is the title of a new illustrated periodical published in Johannesburg, the first number of which we have before us. It is edited by Mr. Hugh Kerr, chemist and druggist, Cleveland, and among the notabilities whose portraits and biographies appear are Mr. Lewis Thomas, President of the Pharmaceutical Society of the Transvaal; Mr. J. H. Dinwoodie, President of the Transvaal Pharmacy Board; and Mr. Robert Butters, formerly President of the Transvaal Pharmaceutical Society. The first number of "Friends and Faces" is interesting to readers who are neither "on rand or reef," and we wish success to the enterprise of our journalistic colleague by the Vaal.

BRITISH ASSOCIATION.

On January 18 the Mayor of Johannesburg called a meeting of the various learned societies (including the Transvaal Pharmaceutical Society) to form a reception committee in connection with the visit of the British Association in August next. The Pharmaceutical Society sent a deputation consisting of Mr. Lewis Thomas (President), Mr. A. S. Smith, and A. Macdonald (Hon. Secretary). Sir David Gill explained that over 300 members of the British Association were to visit South Africa in August, and to deliver lectures on various scientific subjects. A sum of 6,000*l.* had already been subscribed by the South African colonies for initial expenses, but over and above that it was hoped that the different Societies would readily come forward and assist in giving the Association a hearty and fitting welcome. The Chamber of Mines for the Transvaal have added 1,000*l.* to the list, and doubtless the money wanted will be easily raised. Everyone present was invited to join one or other of the sub-committees for the entertainment and reception of visitors. Johannesburgers are eagerly looking forward to the visit. The Pharmaceutical Society is pleased to be honoured by the request to co-operate with other public bodies.

A meeting of the leading citizens of Durban was held in the Council Chamber this week, writes our Durban correspondent on February 11, to consider the preliminary

steps prior to receiving and entertaining the members of the British Association. There were present the Mayor, several members of the Town Council, the leading lights in law, medicine, and finance, and well-known members of the mercantile community. The Mayor, who presided, stated that the Town Council had voted 500*l.* towards the expenses, and would no doubt allow the members a free pass over the Corporation tramway system. He pointed out that the Government had kindly relieved them of the responsibility of railway matters, the Government having decided to issue free passes over the whole of the Natal Railways. He was glad to acknowledge the many offers of local residents to accommodate one or more members of the Association during their stay in the town. In view of the large number coming, however, he was afraid there would not be nearly enough private accommodation to invite all, so it had been suggested to take over one or two of the principal hotels in town for the two days. The actual business of the Association would take place in Capetown and Johannesburg, with the exception of the two lectures in the Town Hall, so that their time in Durban would be chiefly spent in entertainment. Various committees were formed with power to add.

Trade-marks Applied for.

Objections to the registration of any of the undermentioned applications should be lodged with C. N. Dalton, Esq., C.B., Comptroller-General of Patents, Designs, and Trade-marks, at the Patents Office, 25 Southampton Buildings, Chancery Lane, London, W.C., within one month of the dates mentioned. The objection must be stated on Trade-marks Form J, cost *£*1, obtainable through any money-order office.

(From the "Trade-marks Journal," March 1, 1905.)

- "VIRILE" ("Virile" disclaimed); for a tonic syrup. By Cockburn & Co., Ltd., 130 Howard Street, Glasgow. 269,331.
- "PETROM" ("Petro" disclaimed); for chemicals. By Bell Sons & Co., 33 Lydia Ann Street, Liverpool. 269,498.
- Device of an alchemist; for chemicals. By H. & T. Kirby & Co., Ltd., 14 Newman Street, London, W. 269,585.
- "HAEMORRHODINE" ("Haemorrhoid" disclaimed); for chemicals. By H. B. de Boer, Hang 5, Rotterdam. 269,764.
- "WHIRLPOOL"; for aerated beverage machines. By the Phoenix Engineering Co., 141 Vauxhall Road, Liverpool. 263,364.
- "MATTS" ("Matt" disclaimed); for photographic papers. By P. Leuthardt-Thornton, 33 Rydall Gardens, Streatham, London, S.W. 269,651.
- "PHOSPHOTARIC" ("Phospho" disclaimed); for a preparation for acidifying fruit, wines, etc. By Thomson Smith & Co., 197 Stobcross Street, Glasgow. 266,824.
- Device of a Persian kitten; for a hair-food. By J. S. W. Preparations, Ltd., 27 Clement's Lane, London, E.C. 267,534.
- "KARMALAK" ("Carmel" disclaimed); for a hair dressing. By J. S. W. Preparations, Ltd., 27 Clement's Lane, E.C. 267,535.
- "LAKSHMI"; for a skin lotion. By J. S. W. Preparations, Ltd., 27 Clement's Lane, London, E.C. 267,536.
- "ANTIKITO" ("Anti" disclaimed); for toilet articles. By Antikito Syndicate, Ltd., 6 Great Portland Street, London, W. 268,285.
- "HAITROID" ("Hair" disclaimed); for a hair preparation. By W. Pierrepont, 71 The Drive, Fulham, London, S.W. 268,538.
- "BOCK" and device of a girl's head; for cosmetics. By Elizabeth Bock, Wurzbürgerstrasse 16, Berlin. 269,211.

CHEMICAL ANALYSIS IN TURKEY.—A despatch has been received at the Foreign Office from H.M. Embassy at Constantinople, announcing the appointment, by the Turkish Imperial Government, of a Special Commission to study the question of the chemical analysis of articles of consumption imported into Turkey. This step has been taken with a view of meeting the complaints of foreign importers as to the vexatious treatment encountered by them in clearing goods through the Custom House. One of the principal proposals before the Commission is for the constitution of a competent Analytical Department at the Central Customs to obviate the serious loss of time now necessitated by the continual references to the Imperial School of Medicine at Haidar Pasha.

Pharmaceutical Society of Ireland.

COUNCIL-MEETING.

THE Council met at 67 Lower Mount Street, Dublin, on Wednesday, March 1, at 3 P.M. The President (Mr. W. N. Wells) was in the chair, and the other members present were the Vice-President (Dr. Walsh), Messrs. Johnston Montgomery (Belfast), J. E. Connor (Newry), Vincent Johnston, Batt, G. D. Beggs, and Professor Tichborne.

CORRESPONDENCE.

A letter from Mr. J. Donnelly, of Belfast, who had acted as solicitor to the Council, stated that James Guthrie, registered druggist, had been convicted of having kept open a branch shop without a qualified assistant conducting it, and had been fined 2*l.* with costs.

Letters were read from the Clerk of the Privy Council of England, Sir James Sawyer, M.D.; Mr. FitzJames Sawyer; the Pharmaceutical Society of Great Britain; the National Library (Ireland); the College of Surgeons; the Royal University of Ireland; the Copyright Office, and the Apothecaries' Hall, acknowledging the receipt of copies of the Society's calendar.

On the motion of Mr. BEGGS, seconded by Mr. JOHNSTON, thanks were voted to Sir James Sawyer for his donation of copies of his works, entitled "Practical Medicine" and "Insomnia"; and to the Pharmaceutical Society of Great Britain for copies of their registers.

PHARMACY IN BARBADOES.

A letter from the Under-Secretary of State for the Colonies transmitted copies of Acts relating to druggists in Barbadoes. The PRESIDENT said these Acts contain provisions recognising pharmaceutical chemists of Great Britain and Ireland without re-examination; recognising druggists on examination; making it an offence for any unqualified person to sell any drug mentioned in the Pharmacopœia, but enabling the authorities to make a list of articles that may be sold by anyone; a fixed penalty of 20*l.* for keeping open shop and calling oneself a druggist without qualification; and prohibiting any but qualified men from selling or dispensing medicines.

DRUGGISTS AND JURY SERVICE.

The PRESIDENT moved—

That a representation be made to the Lord Chancellor of Ireland in favour of extending to registered druggists the exemption from service on juries already accorded to pharmaceutical chemists by the Juries Procedure (Ireland) Act, 1876, the 39th and 40th Victoria Chapter 78.

He said this matter had during many years past been from time to time brought under the notice of the Council; but whilst their sympathies had always been with the druggists who sought the exemption in question, they had had no means of obtaining it for them. They would be very glad to see them get it. A druggist cannot sell poisons unless he himself is in his shop; and if he were kept away from it on jury service for a day or days he might as well shut up his shop, which would be a very hard state of affairs. Exemption from jury service had been granted to pharmaceutical chemists—not under the Pharmacy Act, as had been erroneously supposed, but by Lord O'Hagan's Act. The Lord Chancellor might get a clause giving the required exemption into some Bill before Parliament; but if he could not do anything for them they would only have to see if any other step could be taken.

The VICE-PRESIDENT seconded the motion. There is no reason, he said, why registered druggists should not have this exemption as well as pharmaceutical chemists. He believed that what led to its being granted to the latter was an incident narrated in one of Dickens's novels, in which an apothecary excused himself to the judge for non-attendance as a juror by saying that his boy could not be got to distinguish Epsom salts from oxalic acid. (Laughter.)

Mr. JOHNSTON MONTGOMERY, in supporting the motion, said a large number of registered druggists are not in a position to employ qualified assistants. In Belfast the assizes often last from ten to fourteen days; and the

absence of registered druggists from their shops during even part of that time involves considerable risk to the public.

The motion was unanimously carried.

THE COMPANIES COMMITTEE.

The PRESIDENT moved—

That the Board of Trade Departmental Committee on Registration of Joint Stock Companies be approached on the subject of the use by such companies of titles implying registration under the Pharmacy Acts.

This, the President said, is a very important matter. A few years ago the Board of Trade held an inquiry in reference to limited companies with a view to the amendment of the existing law; and having seen in the journals a few weeks ago that a Committee had been appointed to go into the matter again he thought that the opportunity should be taken of bringing under its notice the use of the titles of "pharmaceutical chemist" and "druggist" by unregistered persons. From what had taken place in that country lately the judges seem to hold strong views in favour of limited companies not being allowed to practise professions for which they are not qualified. In a recent dentist's case the Master of the Rolls gave a decision which seemed to be favourable to the view he (the President) advocated, for he spoke of what had been done in that case as an attempt to drive through an Act of Parliament, saying that the parties before him could not, as individuals, hold themselves out as dentists, but thought that by forming a bogus company they would be enabled to do so.

Professor TICHBORNE seconded the motion. He had always felt very strongly on this subject; and now is the time for the Council to take action again. The Medical Council had had the matter before a special Committee for some time, and they had nearly succeeded. Some of the company cases in connection with the dental profession had been of a very gross character—a pure matter of money-making without any pretence of professional ability. Some of them might be clever, but in a great number of cases they were mere nobodies—mechanical workers. He knew that there is a decided disposition in the Medical Council to approach the subject again; and he thought that all who are interested—pharmaceutical chemists, dentists, and men holding medical degrees—should unite in an effort to get some definite law passed in connection with examinations so far as companies are concerned.

The resolution was unanimously adopted.

RAISING THE STANDARD.

The PRESIDENT moved the following resolution:

That in the Preliminary examination the candidate must obtain 30 per cent. in each sub-division of Latin and in the optional subject.

The Council had practically decided in favour of this at their last meeting. Sir John Moore had in a report stated that the required percentage was too low; and they had replied that they had over and over again passed resolutions in favour of raising it, and that the Castle would not pass them. Now, as Sir John Moore had in his last report drawn attention to the matter again, it was hoped that the alteration would be sanctioned by the Privy Council.

The VICE-PRESIDENT seconded the motion, which was unanimously assented to.

The PRESIDENT further moved—

That in the Preliminary examination the candidate who obtains 70 per cent. of the total marks, and not less than 50 per cent. in each subject, shall be awarded a pass with honours.

This proposal arose out of one of Sir John Moore's reports, in which he said that the giving of honours would induce candidates to study harder.

Mr. BEGGS seconded the motion. The giving of a "pass with honours" would not only be an inducement to the candidate to use extra diligence, but would also tend to raise the Society's standard of education and bring a better class of young men to the examination.

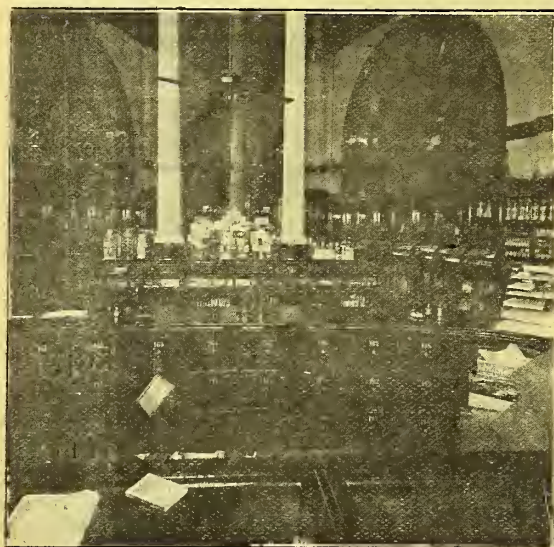
The resolution was unanimously passed.

Mr. David Henderson, of Lisburn Road, Belfast, was elected a member of the Society. Other business having been disposed of, the Council adjourned.

The Hong Kong Dispensary.

A FRENCH CONTEMPORARY recently wrote in the following pleasing strain regarding our Winter Issue :

Le CHEMIST AND DRUGGIST publie, comme tous les hivers, un numéro spécial. La Direction de cet organe s'est surpassée encore si possible, tant pour le luxe de cette édition que pour les matières intéressantes qui y sont traitées. A



VIEW FROM BEHIND ONE OF THE COUNTERS.

signaler, une relation imagée de la situation d'un pharmacien en Chine, un aperçu de la Pharmacie en Syrie, et une étude de la profession en Norvège. L'adoption du système décimal dans le Royaume-Uni y est toujours l'objet de discussions passionnées.

Since then we have received from Mr. W. Brewin Shuttlewood, F.C.S., some further pictures which show how British pharmacy is progressing in China, and these we reproduce on this page. They represent the magnificent new buildings which Messrs. A. S. Watson & Co., Ltd., have erected at Hong Kong. They are situated in the best position in the Colony, and have been specially built for the company, but a few of the upper rooms are let off as offices. The building stands about 100 feet high, and occupies a prominent corner. It is very well lighted during the day, and after night-fall is brilliant with electric light. The interior fittings are sumptuous. The Chinese are among the most skilled and careful artificers in the world, especially in woodwork, but it will be seen that there is no trace of oriental design in the furniture; even the cash-desk and the lady in it are quite like what one sees in busy London.



ALEXANDRA BUILDINGS.



THE RETAIL PHARMACY FROM THE PUBLIC SIDE.

TO THE ALCHEMIST sulphur was the fire inherent in all bodies, what early chemists described as Phlogiston. Mercury was the connecting-link between body and spirit, and the peculiar combination of these two intangible substances was supposed by some to constitute the Philosopher's Stone and the Secret Elixir.

LAFIS PHILOSOPHORUM was supposed by the alchemists to result from an amalgam of mercury and gold after it had been gently heated for a year; but it was never prepared, the explanation of failure always being that some detail of the process had been omitted.